DOCUMENT RESUME

ED 299 424 CE 051 053

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TITLE Computer Business Applications I. Course One. Information Systems Curriculum.
INSTITUTION Association of Information Systems Professionals, Deerfield, IL.; Houston Univ., Tex. Coll. of Technology.
SPONS AGENCY Texas Higher Education Coordinating Board, Austin.
PUB DATE 88
NOTE 191p.; For related documents, see CE 051 054-059.
PUB TYPE Guides - Classroom Use - Guides (For Teachers) (052)

EDRS PRICE MF01/PC08 Plus Postage.
DESCRIPTORS Behavioral Objectives; *Business Education; *Computer Oriented Programs; *Computer Science Education; Curriculum Guides; Higher Education; *Information Processing; *Information Science; *Information Systems; Learning Activities; Word Processing

ABSTRACT

This course is the first of seven in the Information Systems curriculum. The purpose of the course is to set the foundation for the curriculum. The content builds on the existing knowledge of the information processing cycle through hands-on applications and review of terminology, vocabulary, and concepts. An overview of the course sets forth the condition and performance standard for each of the five task areas in the course. These components are provided for each task area: behavioral objective, suggested teaching strategies, content, and summary. Topics covered include concepts, vocabulary, and terminology; computer software and hardware available in the classroom and not available in the classroom; input, process, output, storage/retrieval, distribution of information processing documents; and intensive production of word processing, spreadsheet, and database management documents. A glossary of information systems terms follows task area 1. Appendixes include visuals (transparencies and other teacher materials), student materials (student handouts, work sheets, and exercise materials), evaluation (end-of-task and end-of-unit questions, test items, etc.), and references (including articles and 10 pages of citations). (YLB)

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Computer Business Applications I

course one

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In Cooperation with
ASSOCIATION OF INFORMATION SYSTEMS PROFESSIONALS (AISP)

This project was funded by the Texas Higher Education Coordinating Board through a grant utilizing funds from the Carl D. Perkins Vocational Education Act, Project No. 88103024, Project Year 1988.

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Acknowledgements

Development of this Information Systems curriculum took place during the 1987-1988 school year, culminating in June, 1988. Much time, talent, dedication, and expertise were invested in this project by the following individuals who participated in the Information Systems Curriculum Advisory Committee--our sincere "thanks" to each of you:

Gary Baldwin, Datapoint Corporation, San Antonio
Mary Ann Beach, MBank, Dallas
Claudia Bryan, Fluor Daniel, Sugar Land, TX
Charlie T. Cochran, Xerox Corporation, Arlington, VA
Susie Coon, DISC, Inc., Houston
Robert Day, Texas Higher Education Coordinating Board, Austin
Camille Hatfield, North Harris County College, Houston
Allan J. Krueger, Hanscom AFB, MA
Leo Lefkowits, The ELTU Corporation, Houston
Melody Locke, Texaco, Inc., Houston
Linda Mercer, Information Network, Houston
Gay Sweet-Harris, Thomas Jefferson High School, San Antonio

Also, appreciation is extended to all Association of Information Systems Professionals members who participated in various phases of the study and especially to the hundreds of individuals who responded to both rounds of the 300+ item questionnaire which formed the basis of the curriculum. The support of AISP has been wonderful mainly because of three dedicated individuals:

Glen R. Anderson, AISP Executive Director, Deerfield, IL
Claudia Bryan, AISP National President, Sugar Land, TX
Allan J. Krueger, AISP National Director, Acton, MA

Very special recognition is due Allan Krueger who has been a strong link between the project and AISP and who has given so generously of his time and expertise to assure quality products and to promote the project.

Recognition and gratitude also are expressed to Jim Bauser, Valerie Brantley, Bernard Chin, Cappi McNeill, and Donna Siegel, University of Houston, College of Technology, for their time, talents, and skills in the vital areas of administrative support, materials development, graphics layout, research, and writing in bringing this project to completion.

COMPUTER BUSINESS APPLICATIONS I

The purpose of this course is to set the foundation for the Information Systems curriculum. The content builds on existing knowledge of the information processing cycle through hands-on applications and review of terminology, vocabulary, and concepts.

Reinforcement and enlargement of existing skills is emphasized through exercises to create, edit, revise, and disseminate word processing, database, and spreadsheet documents with graphics incorporated, if possible. Although most hands-on applications will be geared toward the use of microcomputers, applications for dedicated word processor, minicomputer, and host computer environments should be included as appropriate in the course content by the instructor.

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Appendices:

VISUALS

Includes transparencies and other teacher materials.

STUDENT MATERIALS

Includes student handouts, work sheets, and exercise materials.

EVALUATION

Includes end-of-task and end-of-unit questions, test items, etc.

REFERENCES

Includes bibliography, articles, resources, etc.

INSTRUCTOR NOTES

COMPUTER BUSINESS APPLICATIONS I

CONDITION	PERFORMANCE/STANDARD
TASK AREA 1: Given a list of information processing vocabulary and terminology describing the information processing cycle, a list of terms describing formats, structures, and business applications,	the student will be able to define the concepts and terms, identify the structures and formats, and determine the software which will apply to each of the business applications with at least 95% accuracy.
TASK AREA 2: Given a list of computer hardware, software, peripherals, storage devices, and other equipment available in the classroom,	the student will be able to identify the basic parts and describe the use, care, availability, and accessability of that equipment and software, including basic troubleshooting problems with 100% accuracy.
TASK AREA 3: Given a list of computer hardware, software, peripherals, storage devices not available in the classroom,	the student will be able to describe the functions, operations, and other pertinent data to the satisfaction of the instructor.
TASK AREA 4: Given a microcomputer, dedicated word processor, host, or other configuration (in the classroom) and appropriate software on which the student has been trained,	the student will DEMONSTRATE a knowledge of the information processing cycle orally, in writing, or by hands-on exercises including the following: 1) how to input information through manipulation of the electronic keyboard; 2) how to output information through printers; 3) how to process information through formatting functions and commands of word processing, spreadsheet, and database packages; 4) how to store information; 5) how to retrieve information; and 6) how to distribute information to final destination, using traditional methods (mail, face-to-face, etc.), and automated methods (modems or facsimile if equipment is available) to the satisfaction of the instructor.

CONDITION	PERFORMANCE/STANDARD
TASK AREA 5: Given a microcomputer (or other hardware configuration in the classroom) and integrated or appropriate software,	(a) the student will PRODUCE word processing documents which include a) standard formatting features, such as margin settings, line spacing, font styles and pitch, tab settings, indents, block moves, search and replace, page formats, line formats, and print formats and b) advanced formatting features, such as macros, headers and footers, page breaks, spell check, thesaurus, merge operations, sort operations, outlining, endnotes or footnotes, columnar formatting, windows, and other functions; (b) the student will PRODUCE spreadsheet documents which include utilization of the most common features of the software (formula calculations, forecasting, column manipulation, sorting) and create graphics, if available; (c) the student will PRODUCE database documents which include utilization of the features of the software (create, design, modify, add/delete, sort, inquire, search, generate reports); (d) the student will PRODUCE documents which integrate the word processing, spreadsheet, database, and graphics features of the package; with all documents complete with 90% accuracy (or to the level of mastery).

COMPUTER BUSINESS APPLICATIONS I

Task Area 1

Given a list of concepts, vocabulary, and terminology describing the information processing cycle; and a list of terms describing formats, structures, and examples of business applications, the student will be able to define the concepts and terms, identify the structures and formats, and determine the software which will apply to each of the business application examples with at least 95% accuracy.

Suggested teaching strategies: Introductory lecture utilizing questioning techniques with transparencies which stimulate group discussions; oral presentations by students on aspects of the subject; and review techniques which include student handouts and testing materials.

It is redundant to say that the traditional office, defined as the office in which one support professional performs work for one or two "bosses" (sometimes more), is changing. Changes already have occurred in organizational structures, equipment, and skills needed by office workers. One needs only to walk into an office to take note of the changes.

Two factors are having a tremendous push/pull impact on the office: the rate at which technology is changing (push) and the demand for increased productivity (pull). The office is entering a period in which most white-collar workers will be supported directly through a microcomputer with access to integrated information systems tools.

The automated office, defined as the office in which technology of communications and information handling and interactions among people are combined to manipulate information for business decision making, looks and sounds different: personal computers and printers have replaced typewriters; PABX systems have replaced the push button telephone; storage media have replaced filing cabinets; modems have linked offices locally, nationally, and internationally; and intelligent copiers have eliminated many boring, repetitive tasks.

Office automation has been aimed at eliminating boring, repetitive administrative work that can be performed more efficiently and at less cost with computers. However, office automation promises to increase the effectiveness of all levels of the organization--including executives, managers, and professionals. The projected result of office automation has been new office organizational structures, work specialization, new careers, and new skills.

Many times tasks are performed from one location--the professional workstation, which might consist of a microcomputer, telephone, modem, printer, and appropriate software. The tasks performed at the professional workstation include creating, editing, processing, storing, retrieving, and distribution of letters, reports, budgets, lists, graphics, and messages, as well as receiving and sending data. With the appropriate software, the professional workstation can also manage time, perform PERT functions, make to-do lists, make tickler files, and many other functions. From all indications, the technological changes are not going to slow down. **(Note to instructor: Outside readings by students which focus on new and future trends in the office should be required.)**

Effective office automation cannot take place in an organization without an understanding of the "people" issues. A review of the short history of office technology points out that vendors, suppliers, researchers and writers, and equipment manufacturers have focused on the virtues of equipment--electronic mail, word processors, information systems integration--designed to increase productivity of the workers. In some cases, electronic equipment was introduced into the office without notice or attention to people. This put the end users directly on the outside of the discussion and consideration. Many times, office automation was stymied because people were reluctant to change, felt or feared replacement by a machine, and ultimately saw no benefit to them in using automated equipment. This lack of appreciation of people issues led to increased efficiency and decreased productivity.

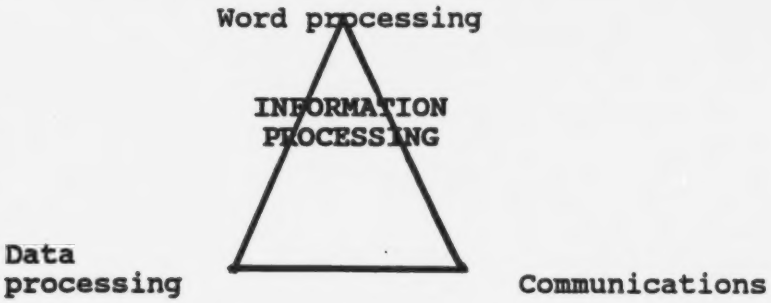
In the early 1980's, John Naisbitt, as well as others, pointed out that there can be no high technology without "high touch". In other words, office systems must be designed and implemented to meet end users' needs and take into full consideration the human factors which enhance and constrain the situation. An appreciation for the human factors and user environment which enables office automatization is called sociotechnical analysis. This analysis emphasizes that office automation affects every aspect of office life: ways of doing work, flows of work, distribution of work, and the quality of relationships among workers. Change which is introduced by information systems should be and must be designed and managed carefully.

The business of the office has been and continues to be information, defined as data in the form of numbers, text, graphics, voice, and pictures which express an idea. It is the lifeblood of the organization. Receiving, processing, and manipulating information for effective and timely decision making ensures that an organization will stay in

business. This is becoming more crucial all the time.

It is important to develop a sound understanding of the terminology, vocabulary, and concepts which are utilized in the automated office. This is the basic knowledge which is required to be able to compete for and maintain positions in information systems. (Note to instructor: Exercise 1-1, a student handout, can be found in the "Student Materials" section.)

1. List the elements of information processing, often called a triangle, and describe the role each plays in the processing of information.



Word processing: The traditional definition of word processing is the use of equipment that automates the keying of documents, people who operate the automated equipment, using standardized procedures, and in an environment which often looks and sounds different due to ergonomic factors, such as furniture configurations, lighting, sound, climate, and other physiological considerations. Word processing is the second oldest element in the information processing triangle.

A new function that is expected to be added as an element of word processing is desktop publishing. Desktop publishing is defined as using a personal computer, a laser printer, and the appropriate software to create documents with graphics, presentational materials, and other formats, such as newsletters, annual reports, and flyers. The incorporation of desktop publishing into word processing at the professional workstation makes it a highly sophisticated system.

Data processing: The traditional definition is the processing of raw data or facts (numbers or symbols) into usable written information. Data processing is the oldest of the three elements in the information

processing cycle and is generated for in-house consumption in dot matrix quality printing.

Communications: Communications in a traditional sense is the human skills used in writing, speaking, composing, keyboarding, editing, and proofreading; none of this changes when added in as an element of information processing, except that communications is expanded to include the use of automated equipment to transmit ideas in the form of text, data, graphics, raw numbers, voice, and image to other desks, offices, buildings, cities, and countries. Generally, this is called telecommunications. Communications is the newest element added to the information processing triangle and the one that is continuing to expand the information processing capabilities of the office.

Information processing: The manipulation of data and text into final format and/or to its final destination utilizing the three elements of word processing/desktop publishing, data processing, and communications.

Information systems: the integration of three elements in the office--human, organizational (including administrative procedures), and technological--which makes it possible to access, process, and disseminate information for effective decision making.

2. List and define the five elements of the information processing cycle through which data are manipulated into final format and/or moved to final destination:

input: keyboarding, scanning, receiving, recalling, or using voice to enter original source of information.

processing: editing, revising, proofreading, boilerplating, or changing original information into final form.

storage/retrieval: saving information on to some type of permanent system for future reference or manipulation. The "stored" copy is called a "soft copy".

output: producing the final product through printing, referred to as the "hard copy" (paper).

distribution: transferring the product to final destination by way of traditional methods: mail systems, person to person, or telephone call; or automated methods: communicating word processors;

facsimile; TWX/telex; voice or message mail; all of which may utilize a number of transmission media and equipment: modems, networks, telephone lines, cables, fiber optics, microwave systems, or satellites.

(Note to instructor: Definitions for all terms are found in the Glossary of Information Systems Terms at the conclusion of this task area.)

3. Define the following vocabulary related to input devices: keyboard (alpha, numeric, symbolic, function keys), OCR or scanner, voice entry (synthesis and recognition), mouse, light pen, touch screen, graphics tablet, communicating word processors, computer-based message system (CBMS), computer-based voice system (CBVS), software.

4. Define the following vocabulary related to output of "hard" copy: printers (dot matrix, letter quality, daisy wheel, ink jet, laser, ion deposition, near-letter quality), copiers (intelligent and laser), and plotters; and output of "soft" copy: VDT, CRT, LCD, EL, gas plasma display, flat-panel display.

5. Define the following vocabulary related to recording media: CD-ROM, floppy diskettes, hard disks, cassettes, magnetic tape, optical disks.

6. Define the following vocabulary related to telecommunications: connectivity; conversion; protocols; expandability; interface; interactive; editability; processability; modem; black box; network; teleconferencing; networks; EBCDIC; ASCII; and virus.

7. Define the strengths/weaknesses and similarities/differences in the following operating systems: PC-DOS, MS-DOS, CP/M, Unix, OS/2, ProDos, and the operating system in your classroom.

8. Define the following vocabulary related to computers: chip, internal processor, RAM, ROM, EPROM, PROM, CMOS, motherboard, monitor, CRT, VDT, mainframe, minicomputer, microcomputer, dedicated or stand-alone computer.

9. Define the following vocabulary related to software: applications software, operating system software, word processing, database management, spreadsheet, graphics, integrated, forms management, accounting, desktop management, desktop publishing, records management/inventory, electronic mail, communications.

10. Define the following vocabulary related to <u>data processing</u>: bit, byte, megabyte, K, gigabyte, 1's and 0's, character, program, BASIC, COBOL, Fortran, I/O functions.

11. From the descriptions of office problems and/or situations given below, please indicate the software which might provide a solution or benefit to the situation. Be specific and explain why you think that software would be beneficial. **(Note to instructor: Exercise 1-2, a student handout, can be found in the "Student Materials" section.)** .

    a. You are administrative assistant to a dress manufacturing company. Your manager has told you that it is time for yearly salary reviews for employees in the department. Each manager has been given an amount of money to spend on salary increases. You need to provide your manager with the performance records and current salaries for each employee so that salary increase percentages can be determined. In addition, you must calculate the salary totals based on the projected percentages for three different salary ranges. Which software, if any, would you use in this situation? **(Database management)**

    b. You work for the Admissions Officer of a large state university. Your office receives a large number of applications for admission for each school term: fall, spring, and summer. You and your supervisor (the Admissions Officer) make decisions about which students to accept and which to reject. Your job is to examine the applications of students who had high school grade point averages of 2.8 and above. Which software, if any, would you use in this situation? **(Database management)**

    c. Your job as administrative assistant to the manager of your company is to provide a daily, weekly, and monthly calendar of events. Your manager has an executive workstation; you have an administrative workstation. Which software, would you use in this situation? And what other activities might you do with this software? **(Desktop management. Other activities: E-Mail, to-do lists, ticklers, name, address, and telephone lists, etc.)**

d. You are the senior production clerk in a chemical complex which is the largest in the southwest. You work in one of the largest production units in the complex. Your supervisor is the superintendent who maintains an extremely busy schedule. Each morning you must transmit the previous day's production record to your superintendent's boss, the manager, and to the Production Scheduling office for the entire chemical complex. The information you need is accessed by way of the PDP-11 on to your terminal (this is a computer which monitors and adjusts the processes in the plant). Which software would you use to transfer the production information to the manager's office and to the central facility?
(Communications)

e. You are an assistant for a claims adjuster for an insurance company. You have just received a call from your supervisor (the claims adjuster) saying that he/she must inspect the scene of a fire for a policyholder. This has interfered with a meeting that he/she had scheduled with another colleague in another department. The claims adjuster asks you to inform the colleague of the cancellation of the meeting and to reschedule the meeting. A computer terminal with a modem is available in both offices. Which software would you use?
(E-Mail, communications, cbms/cbvs)

f. You are a sales marketing representative for a telecommunications company. You are frequently gone from your office to do training for new clients. It is important to receive telephone messages while you are out of the office and to let callers know when you will return. Is there software applications programs or something else to solve your problem? **(Voice mail system)**

g. You work for the technical sales manager for a large drilling mud company, who is frequently out of the country. You need to send orders and requests for service to him/her while he/she is out of the country. This information must be received promptly; the responses must be noted as promptly. Can you use applications software to help you? Or is there something else which also might be helpful? **(Facsimile)**

h. In the same position as "g" above, the technical sales manager also negotiates contracts which must be drafted using a standardized format, signed,

and notarized by lawyers at the United States location and then returned to the technical sales manager wherever the location. Is there a way this can be done with software? Is the returned document considered "legal" and binding? Is there other equipment which also might be used?
(Probably not software, but network linked by satellite; yes the document is "legal"; facsimile could accomplish the same thing.)

i. You are the Information Processing Center Supervisor for an oil exploration company. You have been asked to make a presentation to the general manager's staff, showing last year's productivity figures, staffing and equipment configurations, and future needs for your operation. You want to clearly highlight the service you have provided and its cost effectiveness for the company. Will you need software?
(Yes, word processing, integrated or graphics using a plotter.)

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Suggestions for Instructors

1. A student work sheet covering the concepts and terminology in this task is included in the "Student Materials" section. (It is also suggested that students use computers, if they are available, to take notes during the lecture.)

2. The Glossary of Information Systems Terminology begins on page 10 of this section.

3. Suggested evaluation tools are included in the "Evaluation" section.

4. Field trips and guest speakers will enhance the material in the lecture.

5. Outside readings by students will add to the class discussions and update the material. It is impossible to keep up-to-date with the amount of information which is proliferating the literature. Students are an excellent source of research energy.

Suggested Textbooks

Arn, Joseph V. and Beverly Oswalt. Office Automation: An Information Systems Approach. Boston, MA: Boyd & Fraser Publishing Company.

Arntson, L. Joyce. (1987) Word/Information Processing, 2nd edition. Boston, MA: Kent Publishing Company.

Bergerud, Marly and Jean Gonzalez. Word and Information Processing: Concepts of Office Automation (latest edition). New York: John Wiley & Sons, Inc.

Bergerud, Marly and Thomas Keller. Computers for Managing Information. New York: John Wiley & Sons, Inc.

Clark, James F. and Judith J. Lambrecht. Information Processing: Concepts, Principles, and Procedures. Dallas: South-Western Publishing Company.

Fruehling, Rosemary T. and Constance K. Weaver. Electronic Office Procedures. Dallas: Gregg/McGraw-Hill Book Company.

Luke, Cheryl M. and C. B. Stiegler. Office Systems and Procedures. Dallas: Houghton Mifflin Company.

Rosen, Arnold; Eileen Feretic; and Margaret Hilton Bahniuk. Administrative Procedures for the Electronic Office (latest edition). New York: John Wiley & Sons, Inc.

Saffer, Sally M. (1986) Insight Into Office Automation. Dallas: South-Western Publishing Company.

Wagoner, Kathleen P. and Mary M. Ruprecht. Office Automation: A Management Approach (latest edition). New York: John Wiley & Sons, Inc.

GLOSSARY OF INFORMATION SYSTEMS TERMINOLOGY

ASCII: A U. S. standard code in which 8 binary bits can be combined to represent the characters on a typewriter keyboard. Most commercial VDTs and printers utilize the ASCII code. Stands for American Standard Code for Information Interchange.

automated office: the office in which technology of communications and information handling and interactions among people are combined to handle information for business decision making

BASIC: Beginner's All-Purpose Symbolic Instruction Code. A computer language designed for ease of use. It is particularly suitable for entering and running programs on-line. It is now a standard programming language for microcomputers.

bit: abbreviation for binary digit. It represents the smallest unit of information. Computers usually store information as a series of bits.

byte: a group of bits, such as 4, 6, or 8, operating as a unit. Normally, a byte is 8 bits long.

cassettes: an older technology using magnetic tape for storing digital information. Sometimes used as the backup system for data storage.

CD-ROM: Stands for compact disk-read only memory. Was developed from audio compact disk technology. Because of the digital storage techniques employed, compact disks can be used for the storage and retrieval of all kinds of digitally encoded data.

character: a single number, letter, punctuation mark, or other symbol.

chip: the description for a single integrated circuit.

CMOS (complementary metal oxide semiconductor) is a type of RAM memory used by portable and hand-held computers because it can be used away from a power source. Usually, a small battery is sufficient to operate the computer and provide enough power so that the data stored can be retained when the computer is off.

COBOL: Common Business Oriented Language. A high level programming language designed especially for the manipulation of business data.

communicating word processors: Word processors connected via a network to allow very rapid office-to-office communication of text.

communications: is the human skills used in writing, speaking, composing, keyboarding, editing, and proofreading

computer-based message system (CBMS): systems which available through many commercial electronic mail software packages. Often thought of as value-added products on private branch exchanges (PBX's) and computer systems.

computer-based voice system (CBVS): a form of electronic messaging that allows a caller the option of leaving a message with a message center or asking to be connected to a voice storage device.

connectivity: the degree to which equipment may be connected for the purpose of communications or file transfer.

conversion: the process whereby a file or database is converted from one logical structure to another.

CP/M: Control Program/Microcomputers. A widely used microcomputer operating system which was originally written for 8-bit machines. More powerful 16-bit computers now exist.

CRT: cathode ray tube which uses television picture tube technology to produce an image; a screen that makes it possible to produce a document in the information processing cycle without the use of paper. These documents are referred to as "soft copies".

data processing: The traditional definition is the processing of raw data or facts (numbers or symbols) into usable written information.

dedicated or stand-alone computer: used specifically for one user or for one type of work.

desktop publishing: defined as using a personal computer, a laser printer, and the appropriate software to create documents.

distribution: transferring the product to final destination in one of two ways:

- traditional methods: mail systems, person to person, or telephone call

automated methods: communicating word processors; facsimile; TWX/telex; voice or message mail; all of which may utilize a number of transmission media and equipment: modems, networks, telephone lines, cables, fiber optics, microwave systems, or satellites.

EBCDIC: Extended Binary Coded Decimal Interchange Code developed by IBM as a standard 8-bit transmission code for exchange of data between items of equipment.

editability is achieved when a document transferred from one processor to another is received in the format in which it was sent; no rekeying is required to reproduce the original document. Also referred to as processability.

EL (electroluminescent display) is a new display technology which produces an image when electrons (electronic impulses) are passed through two pieces of glass on which a grid of metal connections is pressed. As the impulses pass through the connections of grids, different portions light up or glow, creating the image.

EPROM: erasable programmable read-only memory is a memory chip that can be programmed and erased by the user and reused several times.

expandability: the ability of a system to be added to or upgraded.

flat-panel display makes the CRT and TV picture tube technology obsolete by providing a screen which can be used on portable computer systems. As the name implies, it is flat, lightweight, and small.

floppy diskettes: A disk made of a flexible material, coated with a magnetic substance designed to store or retrieve digital characters. They are relatively cheap, easy to handle, but take a more restricted storage than a hard disk.

Fortran: an abbreviation for formula translation. A high level computer language extensively used for scientific and mathematical programming.

gas plasma display is similar to EL except that gas is pressed between two plates of glass which are made up of thousands of wires to form a grid. An image is created when electricity is run through the plates and hits an intersection of grid wires.

gigabyte: one thousand million bytes.

graphics tablet: A input device which uses a stylus, diagrams, maps, charts, or free-hand drawings to create graphics on a display screen. May also be referred to as a digitizing tablet.

"hard" copy: the term for the paper copy of a document

hard disk: A magnetic disk which is used for bulk storage of computer data. Hard disks offer much larger storage capacities than floppy disks but have to be handled more carefully. Mainframe computers typically employ hard disks. However, hard disks are becoming more and more prevalent on desktop microcomputers. The alternative name, rigid disk, is sometimes used.

hardware: the physical parts of the computer which are hard: keyboard, wiring, printers, monitor, plastic cases, etc.

I/O functions: Input/output functions in data processing.

information: is data in the form of numbers, text, graphics, voice, and pictures which express an idea

information processing: The manipulation of data and text into final format and/or to its final destination.

information systems: the integration of three elements in the office--human, organizational (including administrative procedures), and technological (including communications and information handling)--which makes it possible to access, process, and disseminate information for effective decision making.

input: keyboarding, scanning, receiving, recalling, or using voice to enter original source of information.

interactive: two-way communication between the user and the computer.

interface: used as a general term to describe the connecting link between two systems. Most frequently refers to the hardware and software required to couple together two processing elements in a computer system.

internal processor: refers to the chip on an integrated circuit board which operates the computer.

ion deposition printer is similar to laser technology in that data are transferred from a host computer onto a rotating drum and then from the drum onto paper. But whereas the laser printer drum is coated with a sensitive

photo-conducive surface, ion deposition printers use a hardened aluminum drum that is capable of millions of copies, is easy to clean, and can pressure-fuse the toner onto paper, thereby simplifying the printer's inner mechanics. This printer technology has been on the market since 1984.

K: abbreviation for kilobyte; 1,024 bits.

keyboard (symbolic, numeric, and function keys): A device equipped with an ordered array of keys (including symbolic, alpha, numeric, and function) which are manually operated to encode data or instructions.

LCD (liquid crystal display) is the display used in digital watches and a variety of VDTs; uses chemicals captured on a piece of glass which appear almost black on a light gray background when electricity is applied to the LCD.

light pen: An electronic stylus containing a light sensor which can be used to specify a position on a cathode ray tube display screen. Used for communication between a user and a computer.

magnetic tape: the most common form of back-up storage. Consists of reels of plastic tape coated with a magnetic oxide. All entries and searches have to be carried out in sequence which limits the possibilities for file construction and gives slower access time than for other magnetic storage devices (disks or optical disks).

mainframe: refers to a large computer which has a 32-bit processor. Designed for use by many users.

megabyte: one million bytes; often used in the context of hard disk storage capacity; e.g., 1 Mb.

microcomputer: a small, desktop computer which uses an 8-bit processor; designed for one person. Microcomputers are now using 16-bit processors and can support storage capacity of a minicomputer.

minicomputer: a computer of intermediate size and computing power and generally using a 16-bit processor. Designed for two or more users.

modem is a device that converts analog signals to digital form and vice versa, thus giving it its name: MOdulator/ DEModulator.

monitor: also referred to as a VDT (video display terminal) or a CRT (cathode ray tube). In the information processing cycle, the monitor is the output device or screen on which digital characters are displayed as they are entered or recalled.

motherboard: a large circuit board inside a computer which contains the microprocessor chip, the memory chips, the microcomputer chip, and other electronic circuitry which make up the central processing unit (CPU). It also includes the exit from and entry to the CPU for connecting other devices.

mouse: a small hand-held device connected to a computer by a thin cable. Under the mouse is a large ball bearing which rolls as the mouse is moved over the surface of a desktop. The computer senses the movement of the rolling ball and acts as though receiving cursor movement instructions from the keyboard.

MS-DOS: MicroSoft-Disk Operating System. A microcomputer operating system development after and more powerful than CP/M and is usually found on 16-bit machines.

network: refers to a set of components connected by channels. In the context of information technology, it usually refers to a system of physically dispersed computers interconnected by telecommunication channels.

OCR: optical character recognition or reader: input device that can read some typewriter and printer typefaces, enabling whole documents to be entered into the memory of a computer.

1's and 0's: digits on the binary scale of notation.

optical disks: a digital data storage device based on video disk technology. Optical disks offer a high storage capacity. A 12-inch disk can hold about one million pages of typed text. Applications include storage and retrieval of library records, storage of documents for document delivery, and the publication and distribution of large scale reference works.

OS/2: Operating System/2: a new microcomputer operating system for the IBM Personal System computers.

output: producing the final product through printing

PC-DOS: An operating system designed especially for the IBM personal computer. It is very similar to MS-DOS.

peripherals: a device under the control of a central processor. It may mean an input device, an output device, or a storage device.

plotters: a print device used to reproduce drawings and graphics on paper. Plotters perform the function of moving pens across a paper to create a fine line.

processing: editing, revising, proofreading, boilerplating, or changing original information into final form.

ProDos: An operating system designed for the Apple II series of microcomputers.

professional workstation: might consist of a microcomputer, telephone, modem, printer, and appropriate software

program: an ordered list of instructions directing a computer or other intelligent device to perform a desired sequence of operations.

PROM: a ROM chip that may be programmed once by the user.

protocols: A set of conventions governing the format of messages to be exchanged within a communication system.

RAM: random access memory is a computer memory chip that is capable of accessing stored data in a direct way.

ROM: read-only memory refers to a prewritten computer memory chip which cannot be changed.

scanning: the sequential examination, or exposure, of a set of characters into the memory of a computer.

sociotechnical analysis is an appreciation for the human factors and user environment which enables office automatization.

"soft" copy: the term for a stored copy of a document

software: non-physical instructions and data contained in and carried by the computer's electrical circuitry. There are two kinds:

> applications software programs: sets of instructions that tell the computer system to perform specific tasks (i.e., word processing, database management, print labels, etc.). Each application is written to accomplish something in particular. The applications program uses the operating system to find its way around the hardware. Software which falls into this

category includes word processing, spreadsheet, database management, graphics, and communications. Two other kinds of applications software programs exist: special-purpose software, such as accounting, inventory, records management, real estate management, insurance records management, etc.; and enhancement applications software, such as add-ons for popular program like Lotus 1-2-3, AppleWorks, etc.; utilities programs such as calendaring, grammar and spelling checkers, dictionaries and thesauruses; etc.

operating system software: a set of instructions that keep track of where all data and programs are located. It communicates between the computer's central processor and the applications software.

storage/retrieval: saving information on to some type of permanent system for future reference or manipulation. Storage can be built into the architecture of a computer which is termed internal or main storage; or it could include all of the devices and storage media that are capable of retaining and accessing data.

telecommunications: the use of automated equipment to transmit ideas in the form of text, data, graphics, raw numbers, voice, and image to other desks, offices, buildings, cities, and countries.

teleconferencing: A general term for any conferencing system employing telecommunication links as an integral part of the system. There are three main types: computer conferencing, video conferencing, and audio conferencing.

touch screen: A computer screen which is sensitive to touch. Allows the user to point at a menu on the display screen in order to make a choice or action or process.

traditional office: is the office in which one support professional performs work for one or two "bosses" (sometimes more)

Unix: A general purpose, multi-user interactive computer operating system developed by Bell Laboratories. Written in C language.

VDT: video display terminal: a computer workstation that consists of a keyboard and video screen and is used to display a printed copy of a document. This document is referred to as a "soft copy".

virus: is a program fragment that attaches itself to the computer's operating system in some manner and stays hidden

for some time. It is passed from one disk to another through contaminated software. These viruses can be programmed to intentionally destroy information on hard or floppy disks; to damage specific data; to cause wholesale destruction; or to fall somewhere in between. Viruses can spread on telecommunications systems when programs are traded through bulletin boards or on public domain software. (See the articles in the "References" section.)

voice data entry: the ability of equipment to translate spoken words into text that will appear on a screen.

voice editing: using the voice rather than keys on a keyboard to edit documents.

voice processing: a method of originating information using the human voice for an information processing system.

voice recognition system: a system of equipment that understands or recognizes the human voice. Voice processing, editing, recognition, and synthesis systems hold promise as the next frontier of development in information processing.

word processing: The traditional definition of word processing is the use of equipment that automates the keying of documents, people who operate the automated equipment, using standardized procedures, and in an environment which often looks and sounds different due to ergonomic factors, such as furniture configurations, lighting, sound, climate, and other physiological considerations.

COMPUTER BUSINESS APPLICATIONS I

Task Area 2

Given a list of computer hardware, software, storage media, peripherals, and other equipment available in the classroom, the student will be able to identify the basic parts and describe the use, care, availability, and accessability of that equipment and software, including basic troubleshooting problems, with 100% accuracy.

Suggested teaching strategies: tour of the classroom with teacher demonstration; follow up with apprentice-type instruction where teacher and student answer questions and perform basic manuevers together; oral or written examination of procedures to ensure automatization. **NOTE: THIS TASK AREA CAN BE OMITTED IF STUDENTS ARE ALREADY FAMILIAR WITH EQUIPMENT, SOFTWARE, AND LAB PROCEDURES TO 100% ACCURACY.**

The purpose of this course is to provide a wide variety of hands-on experience with automated equipment. It is imperative that students be able to identify the hardware, software, peripherals, and other equipment that they will be expected to access and manipulate. In order to have access to the classroom equipment, lab procedures (including resource people) should be specifically stated. (Note to instructor: Exercise 2-1, a student handout, can be found in the "Student Materials" section.)

HARDWARE

1. Identify the basic parts of the computer hardware configuration in your classroom. Generally, these parts should include: CPU, monitor, internal microprocessor (be specific: 8088, 8086, 80186, 80286, 80386, 6502, 65C02, etc.), memory (ROM, RAM, K available for classroom configuration: suggested: 256K for single function software; 512/640K for integrated software; and 1Mb and up for network controllers), keyboard (identify elements which are different from traditional typewriter), printer, hard disk or other storage media, light pen, mouse, voice entry equipment (if available and a part of the course), touch screen, OCR, or graphics tablets.

   THE NAME OF THE COMPUTER(S) USED IN THIS CLASSROOM: _____.

   IT (THEY) HAS (HAVE) _____ AMOUNT OF MEMORY IN THE RAM; IT USES (THEY USE) A _____ MICROPROCESSOR. THE PARTS OF THE KEYBOARD WHICH ARE DIFFERENT FROM A REGULAR TYPEWRITER ARE: FUNCTION KEYS, SOFT KEYS, AN

ESC(APE) KEY, A TEN-KEY PAD, ALT/CONTROL KEYS, CAPS LOCK KEY, A DELETE KEY, etc. DOES IT HAVE A MOUSE OR A LIGHT PEN? (Ask students to identify the keys, also.)

2. Care of hardware should include:

Start-up procedures:

Turn on the equipment in the appropriate sequence. To ensure that students know this procedure, ask them to teach it to someone else in the class. Take the time to allow this to happen right now.

Exhibit proper disk handling techniques.

Open disk drive door(s) and insert disk(s) in the proper sequence and manner. Identify A and B drives.

Close disk drive door(s) and boot the system and appropriate software to begin program execution, identifying and using correct function or control keys required to complete the process.

Adjust the workstation (screen, chair, paper stand, etc.) for comfort and efficient operation. PRACTICE THESE PROCEDURES IMMEDIATELY FOR REINFORCEMENT.

Power-down procedures:

Store the materials created on the computer during work time to the proper media available in the classroom.

Remove disks and store in the location designated in the classroom for students' materials (or the proper care and handling if students are responsible for their own disks).

Turn off the equipment (printer, CPU, monitor) in the proper sequence. Again, ensure automatization by asking students to demonstrate to someone else.

3. Availability and accessability of the hardware in your classroom should be discussed with students, especially if you require laboratory time. Be sure that students know where hours are posted, who is in charge and available to assist them, and how they can access documentation pertinent to the hardware for reference.

THE LAB IS LOCATED: _____
THE LAB HOURS ARE POSTED: _____
THE LAB ASSISTANT(S) IS(ARE): _____
THE DOCUMENTATION IS LOCATED: _____

PAPER AND RIBBONS/TONER LOCATED: _____
THE PROPER PROCEDURE TO CHECK OUT SOFTWARE IS POSTED:
_____.
YOU STORE YOUR DISKS: _____

SOFTWARE

1. Identify and define the basic parts of the media on which programs are recorded, as indicated: floppy disks: sectors, double-/single-sided, double/single density, double sided/quad density; 3-1/2" disks; 5-1/4" disks; 8" disks; hard disks; optical disks (CD-ROM or optical digital disks); purpose of the covering (jacket) of the media.

2. Describe the care and handling of disks:

   Avoid touching the exposed surfaces of the disk.

   Avoid exposure to magnetic and/or electrical equipment.

   Do not write directly on the disk with anything but a felt-tip pin. OR Write on the label before applying it to the disk.

   Do not use paper clips or metal clips to hold groups of disks together or to attach to letters, etc. Avoid exposure to extreme heat or cold. Recommended storage temperatures are between 50-125°F and 20-80% humidity.

   (If possible, open an old disk and display the magnetic sheet on which data are stored.)

   Start-up procedures:

   Proper insertion of disk into disk drive. OR Proper start-up from hard disk.

   What to expect from the disk drive after the software has been inserted: red light on, noises, etc. When or is it permissible to open a disk drive door when the red light is on?

   Power-down procedures:

   Proper disk storage procedure for materials created on the computer during work time. Proper exit from software. Why is it important to go through the "exit" routine (if it is required on your software)?
   Proper removal of disk from disk drive. OR Proper exit from hard disk.

Storage procedure of disk into sleeve; where to store disk in the classroom; or proper care if students are responsible for transporting disks themselves.

3. Discuss accessability and availability of applications software in the classroom: where stored, how to access, what identification is necessary for laboratory assistant (if any), hours of availability, access to documentation for applications software for reference. Where do students obtain data disks? How many will be needed for the course?

THE DOCUMENTATION IS LOCATED: _____
THE PROPER PROCEDURE TO CHECK OUT SOFTWARE IS POSTED: _____.
THE SOFTWARE YOU WILL NEED: _____
_____.
YOU STORE YOUR DISKS: _____

4. Discuss types of application software to be used in this course and the operating systems which correspond: CP/M, MS-DOS, PC-DOS, Unix, Xenix, etc. Specific applications programs might include:

Word processing: SOFTWARE: _____

Defined traditionally as the use of software that automates the keying of documents; also includes people who operate the automated equipment, using standardized procedures, and in an environment which looks and sounds different.

Amount of memory used by the word processing software applications program in your computer environment.

AMOUNT OF MEMORY REQUIRED BY SOFTWARE IS: _____

Uses of word processing equipment in this course include creating, editing, revising, and reformatting memos, letters, repetitive documents, form letters, reports, mailing labels, envelopes.

Formats to be used in creation of word processing documents will include: simplified, block, and modified block formats; open and mixed punctuation; and bound and unbound reports (or other standardized formats which you require).

Spreadsheet: SOFTWARE: _____

Defined as an electronic grid for manipulating numeric data. Also called an electronic worksheet. The

structure of an electronic spreadsheet consists of columns, rows, cells, templates. Parts of a spreadsheet include rows, columns, and cells. Differentiate between cell address and cell content. Use cell format to format labels, values, formulas, and functions to manipulate numeric data.

Amount of memory used by the spreadsheet software applications program in your computer environment.

AMOUNT OF MEMORY REQUIRED BY SOFTWARE IS: _____

Uses of spreadsheet applications software in this course will include entering, editing, and formatting numeric data to create various accounting and financial documents.

Database Management: SOFTWARE: _____

Defined as electronically collecting and storing word and numeric data for subsequent referral and manipulation.

Amount of memory used by the database management software applications program in your computer environment.

AMOUNT OF MEMORY REQUIRED BY SOFTWARE IS: _____

Structure of a database applications program includes fields, records, files, and the data base. Differentiate between field entries and field names.

Uses of database management applications software in this course will include entry of names, entries, commands, and report headings; editing; and formatting data files in order to sort, analyze, list, and compare database information; and printing in various formats.

Graphics (if appropriate): SOFTWARE: _____

Defined as the electronic creation of pictures from data.

Amount of memory used by the graphics software applications program in your computer environment.

AMOUNT OF MEMORY REQUIRED BY SOFTWARE IS: _____

Uses of graphics software in this course will create, edit, and format pie, bar, line, stacked charts from specific data from database or spreadsheet documents.

Integrated software (if appropriate): SOFTWARE: _____

Defined as software which permits the creation and integration of word processing, spreadsheet, database, and graphics to be merged into one document.

Amount of memory used by the integrated software applications program in your computer environment.

AMOUNT OF MEMORY REQUIRED BY SOFTWARE IS: _____

Uses of integrated software in this course will create, edit, and format word processing, spreadsheet, and data base documents which can be integrated into one document, along with the creation of appropriate graphics.

STORAGE MEDIA

1. Identify and discuss the care and handling of other storage media which might be used in your classroom. Specific information should be supplied about cassettes or tape drives:

   Cassettes

   How to backup material on cassettes and where to store the cassettes for future reference. Where cassettes are located.

   Tape reels

   Generally, tape reels are used with larger computers; however, in an environment where terminals are networked into a minicomputer or larger, tape reels may be appropriate storage devices. If this is the case in your classroom, how to store and retrieve will be critical information.

2. Availability and accessability of storage devices in the classroom should be discussed with students so that they know lab hours, assistance available, and any documentation that is available for reference, if this has not been covered previously.

PERIPHERALS

1. Identify the basic parts of the peripherals available in the classroom: printers, monitors, disk drives,

light pen, mouse, OCR, or other peripherals students will use for this course.

2. Describe the care and handling of the peripheral equipment as it applies to your classroom. Care and handling will be dependent on availability in your classroom. The most common peripherals which students most likely will use are printers, monitors, and disk drives.

Specific information regarding printers should include:

Types:

Specific brand of printer on which students will be working; is it dot matrix, character/wheel printer, thermal, ink jet, laser; classified as impact/non-impact; tractor or friction feed: does it feed paper continuously or sheet feed paper or both; does it require ribbons or toner; how fast does it print; price range, if available; other data.

Start-up procedures:

How and where to turn on, when to turn on, how to adjust paper to begin printing, loading paper, feeding paper (if appropriate).

Power-down procedures:

How to turn off, when to turn off; where paper is stored.

Care and handling of printers:

How to change ribbons; how to change the toner cartridge (if allowed); where ribbons and toner are stored; how to change the switches for controlling printing modes; simple troubleshooting exercises for equipment peculiarities.

NAME OF PRINTER: _____
MANUFACTURER: _____

TYPE: DOT MATRIX NEAR-LETTER QUALITY LASER
IMPACT NON-IMPACT DAISY WHEEL
ELECTRONIC TYPEWRITER LETTER QUALITY
PARALLEL SERIAL
PAPER FEED: TRACTOR FRICTION CONTINUOUS
SHEET FEED BOTH
WHAT IS REQUIRED TO CHANGE FROM CONTINUOUS FEED TO SHEET FEED?

DISCUSS HOW TO CHANGE PAPER, RIBBONS, TONER, TURN ON/OFF, TROUBLESHOOTING, OTHER.
DOES IT USE: RIBBON TONER
SPEED: _____
PRICE: _____
HOW IS IT CONNECTED TO COMPUTER?
PAPER AND RIBBONS/TONER LOCATED: _____

Specific information regarding monitors should include:

Start-up procedures:

How and where to turn on; when to turn on in the boot-up sequence; what to expect when material is displayed; adjustment for comfort.

Screen: number of lines displayed, 80-column display, display (green on dark background, black on white background, white on black background, amber on gray or dark background, color), graphics capability (pixel count), touch screen; brand of monitor.

Power-down procedures:

How to turn off; when to turn off in the power-down procedure; results of not being turned off when powered down.

NAME OF MONITOR: _____
MANUFACTURER: _____
NUMBER OF LINES DISPLAYED: _____
HOW TO TURN ON/OFF
COLOR OF SCREEN
GRAPHICS CAPABILITY? PIXEL COUNT (if known)
PRICE: _____
HOW IS IT CONNECTED TO COMPUTER?

Specific information regarding power surge protection should include:

Why it is necessary; what to do in the event that the monitor goes blank; the value of saving often; damage to the equipment which may result without it; costs and types. What is available in your classroom?

IS SURGE PROTECTION PROVIDED ON THE EQUIPMENT STUDENTS WILL BE USING? DISCUSS ANSWERS TO QUESTIONS ABOVE.

Specific information regarding disk drives should include:

Disk drives:

Start-up procedures: Where located on CPU. Proper way to open a disk drive door, without forcing, and the proper insertion of the disk(s). Meaning of noises and red light on disk drives. If more than one disk, which is 1 or 2 or A or B. What happens when disks are inserted the wrong way or into the wrong disk drive to begin with? How does disk drive "read" disk? Is it ever permissible to open a disk drive door when the red light is on? Why or why not? (Suggestion: In the event that students encounter a disk which will not load correctly, turn off the CPU before opening the disk drive door to remove it. NEVER open a disk drive door when the red light is on.)

Power-down procedures: Proper way to remove disks, and to turn off disk drives.

Cleaning: Demonstrate the proper cleaning of the disk read/write heads with a disk-cleaning kit. Discuss the need, timing, and results of proper disk drive maintenance.

Hard disks:

How to access programs stored on the hard disk; what to expect in the way of noise and lights; how to store created materials on to students' floppy disks on floppy disk drives; how to log off hard disk and power down computer.

3. Discuss accessability and availability of equipment: who is available to help, where paper and ribbons are stored if provided to the students, documentation for equipment for reference, etc.

OTHER EQUIPMENT

As applicable and appropriate in your classroom setting, review the start-up, care and handling, and power-down procedures for equipment not specifically mentioned. This might include the mouse, light pen, or touch screen--equipment which would be used in this course.

TROUBLESHOOTING

Discuss with students: IDENTIFY AND CORRECT SIMPLE PROBLEMS WITH THE HARDWARE OR SOFTWARE IN THE CLASSROOM WHICH MIGHT INCLUDE: PAPER ALIGNMENT IN PRINTER, PAPER FEED IN PRINTER, POWER OUTAGES, POWER BLOCKS, LINE SPIKES, DISK ERRORS, AND MECHANICAL PROBLEMS, AND WHAT THEY ARE PERMITTED TO DO TO CORRECT THESE PROBLEMS.

Demonstration of the diagnostic disk to determine the malfunction and/or the necessity of calling for outside help is also appropriate. The purpose of this discussion is to inform students of the most common problems encountered in your particular classroom and to help them learn to make decisions as to when they can correct the problem or when they need to call for assistance. Decision-making skills in this area are important for transferability to the work place.

SUMMARY: Review the care, handling, accessability, and availability of hardware, software, peripherals, and other equipment in your classroom by providing a hands-on test for students: label the equipment in the classroom by putting numbers or instructions on hardware, software, printers, storage devices, cabinets, documentation, etc., asking students to identify the part(s) or demonstrate the care and use. REMEMBER, ACCURACY MUST BE 100%.

****

1. A suggested written evaluation is included in the "Evaluation" section (Test 3).

2. A suggested hands-on evaluation is included in the "Evaluation" section (Test 4).

COMPUTER BUSINESS APPLICATIONS I

Task Area 3

Given a list of computer hardware, software, peripherals, and other equipment not available in the classroom, the student will be able to describe the functions, operation, and other pertinent data to the satisfaction of the instructor.

Suggested teaching strategies: Oral reports, field trips to visit offices with varying kinds of equipment, vendor presentations, group or individual projects--where students visit vendor showrooms to research chosen equipment/ software--would lend themselves to the completion of this task area. Another excellent class field trip is a tour of the computing center/department facilities at your institution, especially if telecommunications has been established campus-wide.

A tried and true source of staying up to date is to require students to read and turn in two articles each week from a current subject-matter specific periodical (a list is provided at the end of this task area and is also in the "References" section to be handed to students). These articles provide the basis for many profitable class discussions.

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1. Discuss the impossibility of being able to stay up to date with start-of-the-art technology, that it is not necessary to be trained on the very latest equipment, and that equipment they learn on in the classroom will prepare them to transfer their skills to the work place.

   However, in order to order to broaden their vision and familiarity with other equipment, software, peripherals, etc., the purpose of this assignment is to acquaint them with other types of equipment and software so that they can begin to develop evaluation skills.

   In order to cover the purpose of this task area:

2. Focus on providing opportunities (such as those listed above) for your students to become familiar with other computer manufacturers (hardware) other than what is in your classroom. These manufacturers might include:

   Microcomputers: Compaq, IBM clones, Zenith, Macintosh, Wang, Data General, Eagle, Televideo, Toshiba, DEC, Epson, Unisys, Leading Edge, Apple, etc.

Mainframes: VAX, Amdahl, Prime, Convergent Technologies, Honeywell, Burroughs, etc.

Telecommunications: modems; PABX; Tymnet; black boxes; dedicated lines; leased lines; cable TV network; multiplexors; networks (such as Ethernet, Novell, DecNet, Disoss, Arcnet), plus other configurations; cellular telephones; telephone systems (AT&T, GE, Bell, Rolm, etc.); satellite owners; fiber optics; etc.

Printers and Copiers: Laser, ion deposition, ink jet, intelligent and laser copiers, networked printers and copiers, etc.

Telephone systems: Rolm, GTE, MCI, Sprint, etc.

3. Focus on providing opportunities (such as those listed above) for your students to become familiar with other **software** packages, such as:

Word processing: WordStar (2000 Plus, Release 3), WordPerfect, Displaywrite 4, Microsoft WORD (for several operating systems), Multimate, PFS Series, Mass II, networkable word processing software, etc.

Spreadsheet: Lotus 1-2-3, Multiplan, Symphony, Enable, Smart, etc.

Database Management: dBase III, RB5000, R:Base, Paradox, Informix, Enable, Oracle, etc.

Graphics: Lotus, Freelance, 35MM Express, Diagraph, Smart, Printmaster, Harvard Presentation Graphics, Chartmaster, etc.

Electronic mail: EasyLink, networked through school on VAX or other system (if available), PROFS Quikcom, 3Com Network, E-Mail, etc.

Integrated: Lotus Symphony, FrameWorks, PFS FirstChoice, Smartware, Jazz, Enable, Excelerator, Multimate Advantage, etc.

Records Management: Reportpack, R:Base, dBase, etc.

Accounting: BPI, Informatics, Real World, Lotus, SMS, Peachtree/Ware, etc.

Telecommunications: Crosstalk, SmartCom, EasyLink, Kermit, ProCom, Hayes Smartmodem, etc.

Desktop Publishing: Ventura Publishing, Pagemaker (Aldous), etc.

Other: CAD/CAM, decision support software, desktop management, statistical, project management, context manager, media conversion, dictionary/thesaurus (if you do not use with classroom software), etc.

4. Focus on providing opportunities (such as those listed above) for your students to become familiar with peripherals: OCRs, scanning devices, plotters, facsimile, voice processors, voice data entry equipment, mouse, graphics tablets, light pen, touch sensitive screens, and other equipment not available in the classroom or laboratory or on campus.

5. Focus on providing opportunities (such as those listed above) for your students to become familiar with other information systems equipment, such as: minicomputers, teleconferencing, optical disk storage, value added networks (such as The Source, Compu-Serve, Dow-Jones, etc.), copiers, phototypesetters, storage devices; and other developing technology related to artificial intelligence: artificial intelligence tools that know individual and corporate styles, "English" conversation between man and computer, self-customizing machines, teaching machines; robotics, writing aids, multiple authoring tools, research to document conversion tools (notecards), document creation and document structuring tools (document modelers); and more.

SUMMARY: Provide opportunities for your students to broaden their knowledge of and familiarity with other information systems equipment and software. An excellent exercise to let students make oral presentations on their findings.

PERIODICALS/RESOURCES

Suggested resources include but should not be limited to:

Periodicals

ACCESS
ADMINISTRATIVE MANAGEMENT (formerly OFFICE ADMINISTRATION AND AUTOMATION)
ARMA RECORDS MANAGEMENT QUARTERLY
BUSINESS COMPUTER DIGEST
BUSINESS WEEK
BYTE
COMPUTER DECISIONS
COMPUTER WORLD, including their Office automation and Telecommunications issues
DATA COMMUNICATIONS
DATAMATION
DATAPRO REPORTS (available for a number of areas in Office Automation, including Automated Office Solutions, Office systems, Word Processing, Copiers and Duplications, Small Computers, Microcomputer Software, and Telecommunications)
FORBES (excellent source for International Data Corporation white papers written several times a year as an advertisement supplement)
FORTUNE (excellent source for International Data Corporation white papers written several times a year as an advertisement supplement)
GRAPHICS ARTS MONTHLY
HIGH TECHNOLOGY
IMPACT
INDUSTRY WEEK
INFORMATION MANAGEMENT
INFOSYSTEMS
INFOWORLD
INTERFACE AGE
MANAGEMENT REVIEW
MANAGEMENT TECHNOLOGY
MANAGEMENT WORLD
MIS WEEK
MODERN OFFICE TECHNOLOGY (formerly MODERN OFFICE PROCEDURES)
THE OFFICE
PC WEEK
THE SEYBOLD REPORT ON OFFICE SYSTEMS
TECHNOLOGY IN FOCUS
TODAY'S OFFICE
TRAINING
TYPEWORLD
WORDS

BOOKS AND MONOGRAPHS

APPROACHING THE AUTOMATED OFFICE, Walter S. Kleinschrod, 1987-88.
(Based on a series of four monographs developed from a grant by Olsten Corporation to the AMS Foundation: This monograph and the other four are available from the Administrative Management Society Foundation, 2360 Maryland Road, Willow Grove, PA 19090).

AUTOMATION OF AMERICA'S OFFICES: U. S. Congress, Office of Technology Assessment, Washington, D. C., U. S. Government Printing Office, OTA-CIT-287, December 1985.

MANAGING NEW OFFICE TECHNOLOGY: Calvin H. P. Pava, 1983.

MEGATRENDS, John Naisbitt (continues to be quoted)

OFFICE AUTOMATION: A USER-DRIVE METHOD, Don Tapscott, 1982.
(Tapscott is considered one of the leading authorities in office automation at the present time.)

THE THIRD WAVE, Alvin Toffler

COMPUTER BUSINESS APPLICATIONS I

Task Area 4

Given a microcomputer, dedicated word processor, host, or other configuration (in the classroom) and appropriate software on which the student has been trained, the student will DEMONSTRATE a knowledge of the information processing cycle orally, in writing, or by hands-on exercises which include the following:

1) how to input information through manipulation of the electronic keyboard (alpha, numeric, symbolic, and function keys);
2) how to process information through formatting functions and commands of word processing, spreadsheet, and database or integrated applications package(s);
3) how to store information on floppy disks or hard disks;
4) how to retrieve information from floppy disks or hard disks;
5) how to output information through printers; and
6) how to distribute information to final destination, using traditional methods (mail, face-to-face, etc.), as well as modems or facsimile (if equipment is available)

to the satisfaction of the instructor.

Suggested teaching strategies: Students: (1) complete hands-on Exercises 4-1 to 4-8; (2) follow oral instructions given by the instructor; (3) complete written test, providing keystrokes to manipulate software to accomplish task; and/or (4) complete any combination of the above.

WORD PROCESSING DOCUMENTS

1. At the end of this phase of Task Area 4, the student will be able to demonstrate how to input information through manipulation of the electronic keyboard (alpha, numeric, symbolic, and function keys) by accomplishing the following commands:

   a. boot up the system, exhibiting proper procedures.
   b. load disk(s) in the proper manner: open the disk drive door, insert the disk, and close the door.
   c. adjust the workstation for comfort and efficient operation.
   d. complete the tutorial or basic training guide (optional).
   e. use the proper commands to format/initialize a disk.

f. access the directory or catalog.
g. create a document by accepting the defaults and/or by setting margins, spacing, length of page, tabs, and naming it.
h. accurately key text, numbers, and symbols using proper techniques from typewritten copy, utilizing proofreader's marks. Students also will demonstrate correct English usage (including grammar, punctuation, and spelling), and proofreading skills to produce mailable documents.

2. At the end of this phase of Task Area 4, the student will be able to process information through formatting functions and commands of word processing or integrated applications package(s) by accomplishing the following commands:

a. demonstrate the use of basic editing functions, including: insert, delete, overstrike, move, copy, global search and replace, cursor movement (horizontal and vertical).
b. demonstrate the use of formatting functions, including margins, tabs, line spacing, hyphenation, pagination, headers and footers, justification, centering (horizontal and vertical), and special embedded print codes.
c. demonstrate proofreading skills by reading from the video screen and on hard copy.

3. At the end of this phase of Task Area 4, the student will be able to demonstrate how to store information on floppy disks or hard disks by accomplishing the following commands:

a. name (if not already named) the document according to the parameters of the software.
b. store (save) the document on the formatted/initialized floppy disk for future reference.
c. use the backup command on the software for storing (saving) documents after a specific time period OR demonstrate the value of storing (saving) documents by saving periodically.

4. At the end of this phase of Task Area 4, the student will be able to demonstrate how to retrieve information from floppy disks or hard disks by accomplishing the following commands:

a. recall previously stored documents to make editing or formatting changes, such as global search and replace.

b. make changes indicated by proofreader's marks.
c. reformat according to indicated changes.

5. At the end of this phase of Task Area 4, the student will be able to demonstrate how to <u>output</u> information through printers by accomplishing the following commands:

a. use software commands to print a document from the video screen.
b. use software commands to print a document from the directory or catalog.
c. print the directory or catalog listing of documents stored on the floppy disk.
d. manipulate the printer or the printing commands in the software to: change font size, change font styles within the document, print more than one copy of a document, print one page at a time, and cancel the printing of a document.

6. At the end of this phase of Task Area 4, the student will be able to demonstrate how to <u>distribute</u> information to final destination, using traditional methods (mail, face-to-face, etc.), as well as modems or facsimile (if equipment is available), by accomplishing the following commands:

a. determine the best method of disseminating the information created for the following situations:
   (1) normal distribution of information to persons inside and outside the organization;
   (2) overnight delivery of document;
   (3) delivery of document (called for at 9:00 a.m.) to manager in another city who needs it by 12 Noon for a meeting at 1:00 p.m.;
   (4) delivery of information to employee in another department who has come in person;
   (5) delivery of copy of document to manager overseas;
   (6) delivery of information to employee in another department who has called;
   (7) delivery of information from one colleague to another colleague who is out of the office but needs the information when he/she returns.
b. demonstrate how to use facsimile, modems, or other information distribution devices which may be available in the classroom to send documents.

7. At the end of this phase of Task Area 4, the student will be able to demonstrate how to store and handle magnetic media, and power down electronic equipment.

8. At the end of this phase of Task Area 4, the student will be able to demonstrate decision making skills related to the following:

   a. set priorities for the tasks to be completed.
   b. use reference documentation for software and hardware in the classroom, as needed.
   c. format and edit documents and subsequent changes.
   d. analyze equipment problems and diagnostic troubleshooting.
   e. load and/or change paper and ribbons (or toner) on printer.
   f. evaluate work to be turned in for mailability: proofread, correct English, and reformat errors.

SPREADSHEET DOCUMENTS

1. At the end of this phase of Task Area 4, the student will be able to demonstrate how to <u>input</u> information through manipulation of the electronic keyboard (alpha, numeric, symbolic, and function keys) by accomplishing the following commands: (Assumes proper start-up and loading and formatting/initializing and tutorial training.)

   a. explain the structure of a spreadsheet consisting of columns, row, cells, and templates.
   b. identify, label, and use the parts of a spreadsheet, including rows, columns, and cells.
   c. identify and define cells using an appropriate cell format (general, currency, percentage, integer) with labels, values, formulas, and functions.
   d. create or open and name a template file.
   e. key accurately and with appropriate technique the labels, values, formulas, and functions of spreadsheets from typewritten copy, using proofreader's marks.

2. At the end of this phase of Task Area 4, the student will be able to <u>process</u> information through formatting functions and commands of spreadsheet or integrated applications package(s) by accomplishing the following commands:

   a. select and use the appropriate basic editing functions of insert, delete, move, copy (replicate), search and find, and replace.

b. use the following editing techniques: clear the spreadsheet, blank cells, escape, access menus/commands, edit or rekey cell definitions.
c. execute the following formatting techniques on a single cell or throughout the entire spreadsheet: change column width, do automatic or manual recalculations, justify labels or values, set decimal positions, insert or move rows and columns, freeze or unfreeze horizontal and/or vertical titles, create split viewing area on the screen (window), replicate cell definitions from one location to another in the spreadsheet as either a relative or absolute replication.
d. explain and apply range and block actions.
e. explain the need to replace a report heading on the template which includes title, source, and creation date.

3. At the end of this phase of Task Area 4, the student will be able to demonstrate how to store information on floppy disks or hard disks by accomplishing the following commands:

a. name (if not already named) the document according to the parameters of the software.
b. store (save) the document on the formatted/initialized floppy disk for future reference.
c. use the backup command on the software for storing (saving) documents after a specific time period OR demonstrate the value of storing (saving) documents by saving periodically.

4. At the end of this phase of Task Area 4, the student will be able to demonstrate how to retrieve information from floppy disks or hard disks by accomplishing the following commands:

a. recall previously stored documents to make editing or formatting changes, such as global search and replace, proofreader's changes, and reformatting.
b. recall previously stored documents to apply forecasting data for creating a new document.

5. At the end of this phase of Task Area 4, the student will be able to demonstrate how to output information through printers by accomplishing the following commands:

a. use software commands to print a document from the video screen.

b. use software commands to print a document from the directory or catalog.
c. print the directory or catalog listing of documents stored on the floppy disk.
d. manipulate the printer or the printing commands in the software to: change font size, change font styles within the document, print more than one copy of a document, print one page at a time, and cancel the printing of a document.
e. if using integrated software, use software commands to integrate the spreadsheet data to a word processing or another spreadsheet document. This includes setting up the report format, eliminating unwanted and unneeded data from the spreadsheet, and transferring the newly created document to the word processing or spreadsheet document. If it is possible with the software available, transfer spreadsheet information to a database document.

6. At the end of this phase of Task Area 4, the student will be able to demonstrate how to distribute information to final destination, using traditional methods (mail, face-to-face, etc.), as well as modems or facsimile (if equipment is available), by accomplishing the following commands:

a. determine the best method of disseminating the information created for the following situations:
   (1) normal distribution of information to persons inside and outside the organization;
   (2) overnight delivery of document;
   (3) delivery of document (called for at 9:00 a.m.) to manager in another city who needs it by 12 Noon for a meeting at 1:00 p.m.;
   (4) delivery of information to employee in another department who has come in person;
   (5) delivery of copy of document to manager overseas;
   (6) delivery of information to employee in another department who has called;
   (7) delivery of information from one colleague to another colleague who is out of the office but needs the information when he/she returns.
b. demonstrate how to use facsimile, modems, or other information distribution devices which may be available in the classroom to send documents.

7. At the end of this phase of Task Area 4, the student will be able to demonstrate how to store and handle magnetic media, and power down electronic equipment.

8. At the end of this phase of Task Area 4, the student will be able to demonstrate decision making skills related to the following:

   a. set priorities for the tasks to be completed.
   b. use reference documentation for software and hardware in the classroom, as needed.
   c. format and edit documents and subsequent changes.
   d. analyze equipment problems and diagnostic troubleshooting.
   e. load and/or change paper and ribbons (or toner) on printer.
   f. evaluate work to be turned in for mailability: proofread, English, and formatting errors.

DATABASE MANAGEMENT DOCUMENTS

1. At the end of this phase of Task Area 4, the student will be able to demonstrate how to <u>input</u> information through manipulation of the electronic keyboard (alpha, numeric, symbolic, and function keys) by accomplishing the following commands:

   a. boot up the system, exhibiting proper procedures.
   b. load disk(s) in the proper manner: open the disk drive door, insert the disk, and close the door.
   c. adjust the workstation for comfort and efficient operation.
   d. complete the tutorial or basic training guide (optional).
   e. use the proper commands to format/initialize a disk.
   f. access the directory or catalog.
   g. explain the structure of a database management file.
   h. identify, label, and use the structure of a database, including fields, records, files, the database.
   i. create, open, and name a database file.
   j. enter accurately, with the proper technique: field names, field entries, commands, report headings.
   k. access and use commercially prepared databases.

2. At the end of this phase of Task Area 4, the student will be able to <u>process</u> information through formatting functions and commands of database management software or integrated applications package(s) by accomplishing the following commands:

a. create and format database reports.
b. design and enter the database entry form.
c. select and use basic editing functions to change data, including: insert, delete, move, copy, search and find, and replace.
d. select and use the appropriate editing mode, such as overstrike and insert.
e. modify the field or record of file structure by adding or deleting fields or changing the order of fields.
f. sort data in order according to: alphabetical, numerical, chronological, ascending, descending, and multiple format.

3. At the end of this phase of Task Area 4, the student will be able to demonstrate how to store information on floppy disks or hard disks by accomplishing the following commands:

a. name (if not already named) the document according to the parameters of the software.
b. store (save) the document on the formatted/initialized floppy disk for future reference.
c. use the backup command on the software for storing (saving) documents after a specific time period OR demonstrate the value of storing (saving) documents by saving periodically.

4. At the end of this phase of Task Area 4, the student will be able to demonstrate how to retrieve information from floppy disks or hard disks by accomplishing the following commands:

a. recall previously stored documents to make editing or formatting changes, such as global search and replace, proofreader's changes, and reformatting of field names and layout.
b. recall previously stored documents to apply sorting routines for creating new documents with current data; or to insert, delete, or recalculate records in the file.

5. At the end of this phase of Task Area 4, the student will be able to demonstrate how to output information through printers by accomplishing the following commands:

a. use software commands to print a document from the video screen.
b. use software commands to print a document from the directory or catalog.

(5) load and/or change paper and ribbons (or toner) on printer.
(6) evaluate work to be turned in for mailability: proofread, correct English, and formatting errors.
(7) demonstrate how to store and handle magnetic media, and power down electronic equipment.

INTEGRATED APPLICATIONS

Integrated applications software packages are designed to include different applications programs, usually word processing, spreadsheet, database management, and graphics, working together and sharing commands or data all on one software package. The functions and commands mentioned above for word processing, spreadsheet, database management, and graphics should be used as the basis for operational knowledge of each of these functions in the integrated applications software package.

In addition, the following objectives should be added in order to achieve the feel for the "integration" of the functions, using the software in the classroom:

(1) Merge two word processing documents.
(2) Merge two database management documents.
(3) Merge a database management document with a word processing document.
(4) Merge two spreadsheets.
(5) Merge a spreadsheet document with a word processing document.
(6) Merge portions of a database management document with a word processing document.
(7) Merge portions of a spreadsheet document with a word processing document.
(8) Use a spreadsheet to create a graphic.
(9) Integrate a graph with a word processing document.
(10) Integrate a spreadsheet and graph into a word processing document.

Distribution and decision-making skills also apply here.

(Suggested textbook for the Graphics and Integrated exercises: Groneman and Owen, Applications Using the Personal Computer. Dallas: South-Western Publishing Company.)

SUMMARY

At the conclusion of Task Area 4, students will be able to demonstrate the information processing cycle as it applies to word processing, spreadsheet, database management, graphics, and integrated documents to the satisfaction of the instructor. The purpose of this task area is to review the background of the students, to provide further practice in the information processing cycle, to apply communication skills of proofreading, English, and grammar, and to provide students with the opportunity to enhance their evaluation skills. It is recommended that electronic proofreading aids, such as dictionaries, thesauruses, spellers, and grammar checks not be used at this point in the course. It is important for you, the instructor, to be able to evaluate these human communication skills.

The following suggested exercises are provided for review purposes. The student handouts for these exercises are found in the "Student Materials" section:

Exercise 4-1: Word processing
Exercise 4-2: Word processing
Exercise 4-3: Word processing
Exercise 4-4: Spreadsheet
Exercise 4-5: Spreadsheet
Exercise 4-6: Spreadsheet
Exercise 4-7: Database management
Exercise 4-8: Distribution

A suggested self evaluation form is provided for students' use in the "Student Materials" section. It is critical that they be able to take an objective view of their own work; hence, the self evaluation. Instructors may also want to use the same format for formative evaluation purposes. In this way, students and instructors are using the same criteria for evaluation. A copy of this evaluation form is included in the "Evaluation" section.

Suggested solutions to the Exercises 4-1 to 4-8 are found in the "Evaluation" section.

****

NOTE TO INSTRUCTOR: The review portion of Computer Business Applications I concludes with the completion of these exercises. Task Area 5 will provide opportunities to learn and practice advanced features of word processing, spreadsheet, database, graphics, and integrated applications software, including electronic spell and grammar check and dictionary and thesaurus software.

COMPUTER BUSINESS APPLICATIONS I

Task Area 5

Given a microcomputer, dedicated word processor, host, or other configuration (in the classroom) and integrated or appropriate software on which the student has been trained, the student will **UTILIZE** advanced software features and **PRODUCE:**

- word processing documents which include manipulation of a) standard formatting features, such as margin settings, line spacing, font styles and pitch, tab settings, indents, block moves, search and replace, page formats, line formats, and print formats and b) advanced formatting features, such as macros, headers and footers, page breaks, spell check, thesaurus, merge operations, sort operations, outlining, endnotes or footnotes, columnar formatting, windows, and other functions with all documents complete with 90% accuracy (or to the level of mastery).

- spreadsheet documents which include utilization of the most common features of the software (formula calculations, forecasting, column manipulation, sorting) and create graphics, if available, with all documents complete with 90% accuracy (or to the level of mastery).

- database documents which include utilization of the features of the software (create, design, modify, add/delete, sort, inquire, search, generate reports) with all documents complete with 90% accuracy (or to the level of mastery).

- documents which integrate word processing, spreadsheet, database, and graphics features of the package with all documents complete with 90% accuracy (or to the level of mastery).

Suggested teaching strategies:

(1) students complete hands-on exercises;

(2) students follow oral instructions given by the instructor;

(3) students make decisions as to priorities for work to be accomplished; (This should provide the basis for classroom discussion regarding importance of decision making skills on the job.)

(4) students should be given the opportunity to work under pressure with instructor-imposed deadlines for portions of the work to be accomplished; and

(5) students should continue to evaluate their own work as in the exercises for Task Area 4.

(6) Summative evaluation for the course may be based on a compilation of formative evaluation grades received for the production of these tasks; or a final summative hands-on test which focuses on skills learned in this task area.

****

SUGGESTED TEXTBOOKS FOR TASK AREA 5

Blanc, Iris and Cathy Vento. Spreadsheets: Skill Buidling Exercises and Applications. Dictation Disc Company.

Blanc, Iris. Skill Building Exercises for the Word Processor. Dictation Disc Company.

Blanc, Iris and Elinore Hildebrandt. Database. Dictation Disc Company.

Busche, Don. Microcomputer Business Applications and Projects. (To be used with Bergerud and Keller's Computers for Managing Information. John Wiley & Sons, Inc.

Clayton, Dean and Ok D. Park. Appleworks^{R}: Integrated Applications for Microcomputers. South-Western Publishing Company.

Crawford, T. James, Erickson, Lawrence W., Beaumont, Lee R., Robinson, Jerry W., and Ownby, Arnola C. Century 21 Keyboarding, Formatting, and Document Processing. (College Edition) South-Western Publishing Company.

Fruehling, Rosemary T. and Weaver, Constance K. Electronic Office Procedures. (Applications Manual, also) Gregg Division, McGraw-Hill Book Company.

Groneman, Nancy and Owen, Susan. Applications Using the Personal Computer. South-Western Publishing Company.

LaBarre, James E., Mitchell, William M., and Mach, K. A. College Typewriting: A Mastery Approach (Advanced). SRA.

Rosen, Arnold and William Hubbard. Information Processing: Keyboarding Applications and Exercises. John Wiley & Sons, Inc.

Simcoe, Annell Lacy. Word Processing Applications in Automated Offices. New York: John Wiley & Sons.

Sullivan, David R., Lewis, Theodore G., and Cook, Curtis R. Computing Today: Microcomputer Concepts and Applications. Houghton Mifflin Company.

Varner, Jane Terzick. Word Processing Operations. (latest edition). SRA.

...plus others.

Computer Business Applications I

course one

Visuals

•INFORMATIONSYSTEMSCURRICULUM•INFORMATIONSYSTEMSCURRICULUM•INFORMATIONSYSTEMSCURRICULUM•INFORMATIONSYSTEMSCURRICULUM•INFORMATIONSYSTEMSCURRICULUM•INFORMATIONSYSTEMSCURRICULUM•

THE TRADITIONAL OFFICE

CHARACTERIZED BY ONE-ON-ONE RELATIONSHIP WITH ONE OR MORE "BOSSES"

WHAT ARE SOME OF THE OTHER CHARACTERISTICS OF THE TRADITIONAL OFFICE?

THE PUSH/PULL ON THE OFFICE:

RAPID TECHNOLOGY CHANGE (PUSH)

DEMAND FOR INCREASED PRODUCTIVITY (PULL)

(AT ALL LEVELS)

THE AUTOMATED OFFICE:

WHERE TECHNOLOGY OF COMMUNICATIONS
AND INFORMATION HANDLING
AND INTERACTIONS AMONG PEOPLE
ARE COMBINED TO MANIPULATE
INFORMATION FOR BUSINESS
DECISION MAKING.

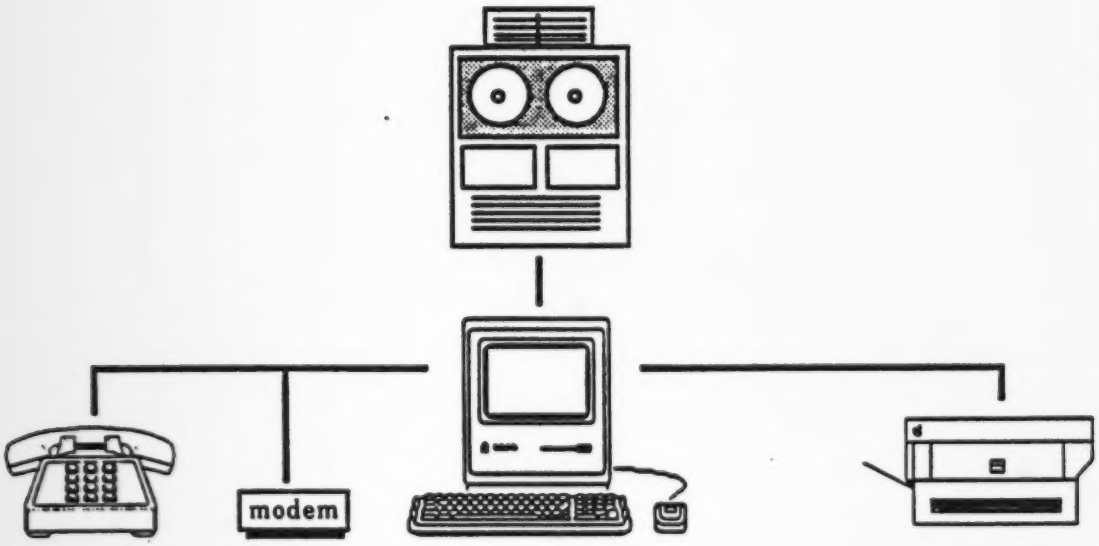
CHARACTERISTICS OF THE AUTOMATED OFFICE:

BETTER WORK DISTRIBUTION
ACCESS TO INFORMATION
INCREASED PRODUCTIVITY
$
FREEDOM FROM BORING, REPETITIVE TASKS
INCREASED SKILL LEVELS
CAREER OPPORTUNITIES

THE PROFESSIONAL WORKSTATION

MICROCOMPUTER
TELEPHONE
MODEM
PRINTER
STORAGE MEDIA
SOFTWARE

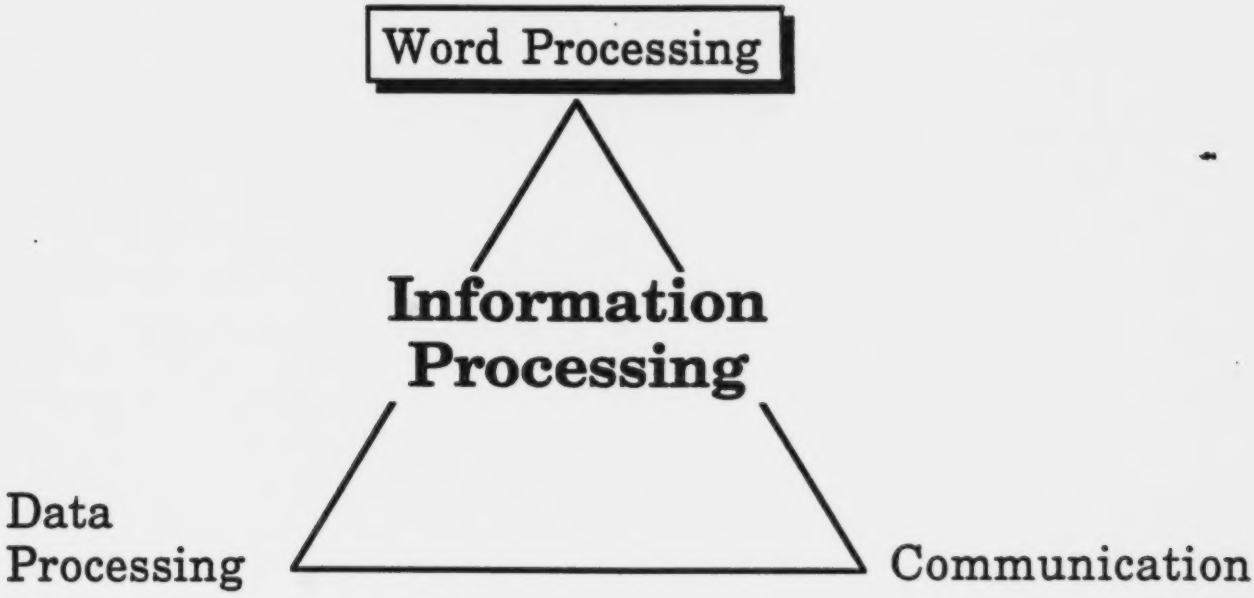
COMBINED WITH ERGONOMICS



WHAT IS "INFORMATION"?

DATA IN THE FORM OF
NUMBERS,
TEXT,
GRAPHICS,
VOICE,
PICTURES
WHICH EXPRESS AN IDEA.

WHAT ARE SOME FORMS OF INFORMATION USED IN THE OFFICE?


Word Processing
Information Processing
Data Processing
Communication

INFORMATION PROCESSING

is the

MANIPULATION OF DATA
INTO FINAL FORMAT
AND MOVED TO ITS FINAL
DESTINATION
UTILIZING ANY OF THE
3 ELEMENTS:
WORD PROCESSING
DATA PROCESSING
COMMUNICATIONS

INFORMATION SYSTEMS

IS

INTEGRATING 3 ENTITIES:

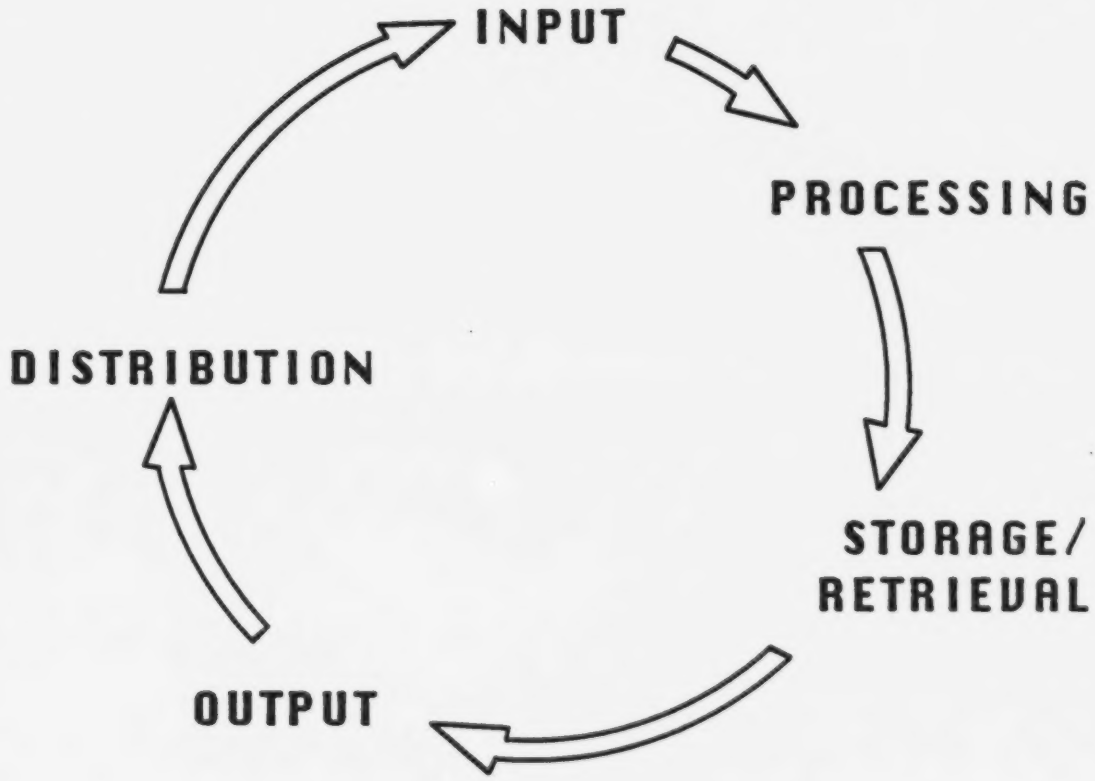
HUMAN

ORGANIZATIONAL
(AND ADMINISTRATIVE PROCEDURES)

TECHNOLOGY

TO ACCESS, PROCESS, AND DISSEMINATE
INFORMATION FOR
EFFECTIVE
DECISION MAKING

INFORMATION PROCESSING CYCLE



INPUT

KEYBOARDING, SCANNING, RECEIVING, RECALLING, OR USING VOICE TO ENTER ORIGINAL SOURCE OF INFORMATION.

DEVICES USED TO INPUT DATA:

KEYBOARD
OCR
SCANNERS
VOICE INPUT UNIT
COMMUNICATING WORD PROCESSORS
SOFTWARE
OTHERS?

PROCESSING

IS

EDITING,
REVISING,
PROOFREADING,
BOILERPLATING,
OR CHANGING
ORIGINAL INFORMATION
INTO
FINAL FORM.

STORAGE/ RETRIEVAL

IS

SAVING INFORMATION ON TO SOME TYPE OF PERMANENT SYSTEM FOR FUTURE REFERENCE OR FOR MANIPULATION.

THE "SOFT COPY" OF A DOCUMENT

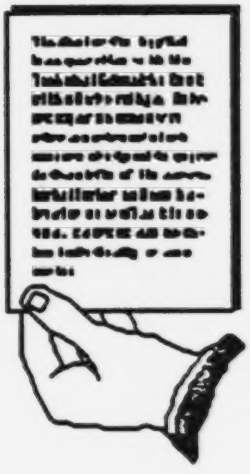
STORAGE SYSTEMS MAY INCLUDE:

FLOPPY DISKETTES
HARD DISK
CD-ROM
OPTICAL DISK
MAGNETIC TAPE
CASSETTES
OTHERS

COMPUTER VOCABULARY:

CRT
VDT
MONITOR
MOTHERBOARD
CHIP
INTERNAL PROCESSOR
RAM
ROM
EPROMS
PROMS
MAINFRAME
MINICOMPUTER
MICROCOMPUTER
DEDICATED OR
STAND-ALONE COMPUTER

OUTPUT
IS
THE "HARD COPY"
OF A DOCUMENT



MAY BE PRODUCED THROUGH
PRINTERS
PLOTTERS
COPIERS

DISTRIBUTION
IS
TRANSFERRING THE
PRODUCT TO ITS
FINAL DESTINATION
BY WAY OF

TRADITIONAL MEANS:
U.S.P.O.
TELEPHONE
PERSON-TO-PERSON
INTERNAL MAIL
OR
AUTOMATED MEANS:
COMMUNICATING WORD
PROCESSORS
FAX
TWX/TELEX
VOICE MAIL
E-MAIL
NETWORKS

ALL OF WHICH MAY USE
TELEPHONE LINES
CABLES
FIBER OPTICS
MICROWAVE
SATELLITES

TELECOMMUNICATIONS IS USING AUTOMATED TOOLS TO COMMUNICATE OVER DISTANCES

TERMINOLOGY:

PROTOCOLS

CONNECTIVITY

INTERFACE

INTERACTIVE

EDITABILITY

PROCESSABILITY

MODEM

BLACK BOX

NETWORK

EBCDIC

ASCII

AN OPERATING SYSTEM:

-- ENABLES THE COMPUTER TO OBEY THE COMMANDS OF APPLICATIONS SOFTWARE

-- GENERALLY OPERATES BETWEEN THE SOFTWARE AND THE HARDWARE

-- IS "TRANSPARENT" TO THE END-USER

SOME COMMON OPERATING SYSTEMS:

PC-DOS
MS-DOS
CP/M
UNIX
XENIX
OS/2
ProDos

DATA PROCESSING VOCABULARY RELATED TO INFORMATION PROCESSING

CHARACTER
BIT
BYTE
K
MEGABYTE
GIGABYTE
1'S AND 0'S
PROGRAM
BASIC
COBOL
FORTRAN
I/O FUNCTIONS

INFORMATION SYSTEMS SOFTWARE

APPLICATIONS SOFTWARE
OPERATING SYSTEM SOFTWARE
WORD PROCESSING
DATABASE MANAGEMENT
SPREADSHEET
DESKTOP PUBLISHING
GRAPHICS
FORMS MANAGEMENT
ACCOUNTING
RECORDS MANAGEMENT
DESKTOP MANAGEMENT
E-MAIL
COMMUNICATIONS
OTHER...

AN ELECTRONIC SPREADSHEET

COMBINES THE

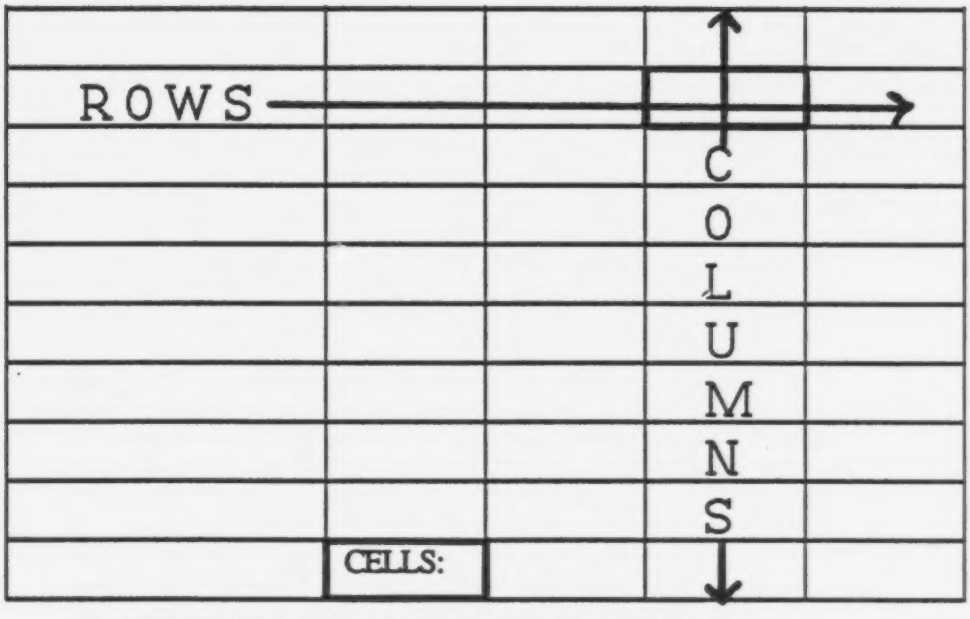
PENCIL
CALCULATOR
ACCOUNTING WORKSHEET
AND
CRYSTAL BALL

TO

CREATE DATA
STORE DATA
PERFORM CALCULATIONS
PREDICT OUTCOMES

THE ELECTRONIC SPREADSHEET IS MADE UP OF

ROWS
COLUMNS
CELLS
WORK AREAS
DISPLAY AREAS



(WHERE ROWS AND COLUMNS INTERSECT)

AN ELECTRONIC SPREADSHEET

-- LABELS ROWS AND COLUMNS WITH WORDS, NUMBERS, OR SYMBOLS.

-- CHANGES COLUMN WIDTH FOR LARGE LABELS.

-- USES FORMULAS TO ASK "WHAT IF" QUESTIONS.

-- USES SYMBOLS IN FORMULAS TO ESTABLISH ITS OWN LANGUAGE:

+ ADDITION
- SUBTRACTION
* MULTIPLICATION
/ DIVISION

DATABASE MANAGEMENT SOFTWARE ORGANIZES INFORMATION FOR ANALYSIS AND FOR DECISION MAKING

INFORMATION HANDLING

COLLECTING
*
ORGANIZING
*
STORING
*
CLASSIFYING
*
ANALYZING
*
INTERPRETING
*
RETRIEVING
*
COMMUNICATING
*

DATABASE VOCABULARY

DATABASE

FILE

RECORD

CATEGORY/FIELD

ENTRY

CHARACTER

DATABASE VOCABULARY

USING THE TELEPHONE BOOK AS AN EXAMPLE:

DATABASE: THE ENTIRE TELEPHONE BOOK, INCLUDING YELLOW PAGES.

FILE: THE YELLOW PAGES LISTINGS FOR ONE CATEGORY OF LISTINGS.

EX. COMPUTER VENDORS

RECORD: THE YELLOW PAGES LISTING FOR ONE COMPUTER VENDOR.

EX. PERFORMANCE COMPUTERS.

CATEGORY/ FIELD: THE YELLOW PAGES CATEGORY OR FIELD USED TO ENTER DATA FOR ALL THE COMPUTER VENDORS.

EX. "STREET ADDRESS", "CITY", "STATE", "ZIP", ETC.

ENTRY: THE YELLOW PAGES LISTING OF THE ADDRESS FOR ONE PARTICULAR COMPUTER VENDOR.

EX. 828 SOUTH BOULEVARD, #1

CHARACTER: ONE OF THE NUMBERS, LETTERS, OR SYMBOLS IN THE ADDRESS OR NAME OF THE COMPUTER VENDOR.

EX. 8, S, B, D, #, ETC.

TO CREATE A DATABASE MANAGEMENT FILE, THE USER MUST ASK CERTAIN QUESTIONS:

HOW MANY RECORDS PER FILE?

WHAT IS THE MAXIMUM NUMBER OF CATEGORIES OR FIELDS PER RECORD?

WHAT IS THE MAXIMUM RECORD LENGTH?

WHAT IS THE MAXIMUM ENTRY LENGTH?

WHAT IS THE MAXIMUM CATEGORY NAME LENGTH?

TO PLAN AND CREATE A DATABASE

THE USER MUST:

CONSIDER NEEDS

GENERATE A LIST OF CATEGORIES OR FIELDS

ORGANIZE THE LIST AS DATA SHOULD BE ENTERED

CONSIDER USES OF DATABASE

RECHECK THE CATEGORIES, FIELDS, AND NEEDS

ENTER THE DATA

MANIPULATE THE DATA IN NEEDED FORMATS

TAKING CARE OF YOUR COMPUTER

DO NOT EAT OR DRINK AROUND YOUR COMPUTER.

***

BE SURE TO TURN OFF THE COMPUTER WHEN YOU HAVE COMPLETED YOUR WORK.

***

BEFORE YOU TURN OFF THE COMPUTER, STORE YOUR DATA.

***

TAKE CARE NOT TO MOVE OR BUMP THE COMPUTER OR PRINTER WHEN THE POWER IS ON.

***

NEVER PUT A DISK ON TOP OF THE MONITOR. THIS MAY CREATE A MAGNETIC FIELD AND ERASE DATA ON IT.

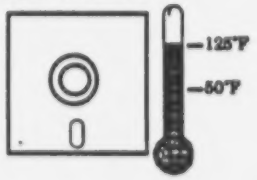
***

Care of Your Diskettes

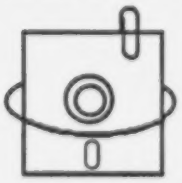
1. Do not fold or bend your disks.

2. Do not touch exposed disk surface.

3. Store disks in area between 50°F to 125°F



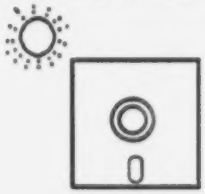
4. Do not use paper clips or rubber bands on disks



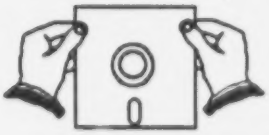
5. Keep disk away from magnet or any magnetic materials, especially any electrical equipment.

6. Do not wet disks. Wipe and allow them to dry before using.

7. Do not expose disks to excessive heat or sunlight.

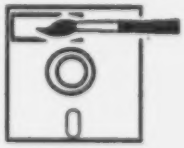


8. Handle disks by the edges.



9. Do not place heavy objects on disks.

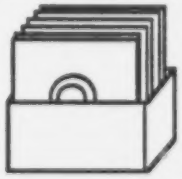
10. Use only felt tip pens to write on disk labels.



11. Do not erase labels already attached to the disks.

12. When not in use, store disks in their protective jackets. This will prevent contaminants such as smoke and dust from settling on disk surface.

13. Store disks vertically, and do not packed them together.



14. Care must be taken when inserting disks in the disk drives, especially when opening and closing the disk door.

Computer Business Applications I

course one

Student Materials

•INFORMATIONSYSTEMSCURRICULUM•INFORMATIONSYSTEMSCURRICULUM•INFORMATIONSYSTEMSCURRICULUM•

COMPUTER BUSINESS APPLICATIONS I
Exercise 1-1

1. Two factors are having a tremendous impact on the office:

   _____

   and the _____.

2. The traditional office may be defined as: _____
   _____
   _____
   _____.

   Some other characteristics of the traditional office include: _____
   _____
   _____
   _____.

3. In contrast, the automated office may be defined as:
   _____
   _____
   _____
   _____.

4. What is "sociotechnical analysis"? What is its importance to the automated office?
   _____
   _____
   _____
   _____
   _____
   _____
   _____

5. Professional workstations are: _____
   _____
   _____
   _____
   _____.

   Some of the automated office functions which may be performed at a professional workstation include:
   _____
   _____
   _____
   _____
   _____.

6. What is information? _____
   _____
   _____.

Why is it the "business of the office"?

_____
_____
_____
_____.

7. Illustrate figuratively and label the information processing triangle on the back of this page.

8. Name and define each element of the triangle:

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Define the new element that has been added to the word processing element and what kind of impact will this element have on information processing?

_____
_____
_____
_____
_____
_____
_____

9. Information processing can be defined as:

_____
_____
_____
_____
_____

10. Define the five elements of the information processing cycle:

input: _____

output: _____

storage/retrieval: _____

processing: _____

distribution: _____

11. Name and define the more common input devices?

12. Name and define the more common output devices.

13. List and define recording media.

14. Telecommunications vocabulary:

15. Define the term operating system.

16. Name some of the more common operating systems and the strengths/weaknesses and similarities/differences in each of them.

PC-DOS:

MS-DOS:

CP/M:

Unix:

OS/2:

ProDos:

Others:

17. Define hardware.

18. What do the following terms have to do with computers?

chip: _____

internal processor: _____

RAM: _____

ROM: _____

EPROM: _____

PROM: _____

Motherboard: _____

monitor: _____

CRT: _____

VDT: _____

LCD: _____

Gas plasma display: _____

Electroluminescent display: _____

Flat-panel display: _____

keyboard: _____

mainframe: _____

minicomputer: _____

microcomputer: _____

dedicated or stand-alone computer: _____

modem: _____

black box: _____

peripherals: _____

19. Define software.

20. What are the purposes of the following software?

word processing: _____

spreadsheet: _____

database management: _____

graphics: _____

forms management: _____

accounting: _____

desktop management: _____

records management/inventory: _____

electronic mail: _____

communications: _____

integrated: _____

21. Define the following terms as they relate to data processing:

bit: _____

byte: _____

megabyte: _____

K: _____

gigabyte: _____

1's and 0's: _____

character: _____

BASIC: _____

COBOL: _____

Fortran: _____

I/O functions: _____

program: _____

22. Define information systems.

_____

COMPUTER BUSINESS APPLICATIONS I
Exercise 1-2

From the descriptions of office problems and/or situations given below, please indicate the software which might provide a solution or benefit to the situation. Be specific and explain why you think that software would be beneficial.

a. You are administrative assistant to a dress manufacturing company. Your manager has told you that it is time for yearly salary reviews for employees in the department. Each manager has been given an amount of money to spend on salary increases. You need to provide your manager with the performance records and current salaries for each employee so that salary increase percentages can be determined. In addition, you must calculate the salary totals based on the projected percentages for three different salary ranges. Which software, if any, would you use in this situation?

_____

_____

_____

_____

_____

b. You work for the Admissions Officer of a large state university. Your office receives a large number of applications for admission for each school term: fall, spring, and summer. You and your supervisor (the Admissions Officer) make decisions about which students to accept and which to reject. Your job is to examine the applications of students who had high school grade point averages of 2.8 and above. Which software, if any, would you use in this situation?

_____

_____

_____

_____

_____

c. Your job as administrative assistant to the manager of your company is to provide a daily, weekly, and monthly calendar of events. Your manager has an executive workstation; you have an administrative workstation. Which software, would you use in this situation? And what other activities might you do with this software?

_____

_____

_____

_____

_____

d. You are the senior production clerk in a chemical complex which is the largest in the southwest. You work in one of the largest production units in the complex. Your supervisor is the superintendent who maintains an extremely busy schedule. Each morning you must transmit the previous day's production record to your superintendent's boss, the manager, and to the Production Scheduling office for the entire chemical complex. The information you need is accessed by way of the PDP-11 on to your terminal (this is a computer which monitors and adjusts the processes in the plant). Which software would you use to transfer the production information to the manager's office and to the central facility?

_____

_____

_____

_____

_____

e. You are an assistant for a claims adjuster for an insurance company. You have just received a call from your supervisor (the claims adjuster) saying that he/she must inspect the scene of a fire for a policyholder. This has interfered with a meeting that he/she had scheduled with another colleague in another department. The claims adjuster asks you to inform the colleague of the cancellation of the meeting and to reschedule the meeting. A computer terminal with a modem is available in both offices. Which software would you use?

_____

_____

_____

_____

_____

f. You are a sales marketing representative for a telecommunications company. You are frequently gone from your office to do training for new clients. It is important to receive telephone messages while you are out of the office and to let callers know when you will return. Is there software applications programs or something else to solve your problem?

_____

_____

_____

_____

_____

g. You work for the technical sales manager for a large drilling mud company, who is frequently out of the country. You need to send orders and requests for service to him/her while he/she is out of the country. This information must be received promptly; the responses must be noted as promptly. Can you use applications software to help you? Or is there something else which also might be helpful?

_____

_____

_____

_____

_____

h. In the same position as "g" above, the technical sales manager also negotiates contracts which must be drafted using a standardized format, signed, and notarized by lawyers at the United States location and then returned to the technical sales manager wherever the location. Is there a way this can be done with software? Is the returned document considered "legal" and binding? Is there other equipment which also might be used?

_____

_____

_____

_____

_____

i. You are the Information Processing Center Supervisor for an oil exploration company. You have been asked to make a presentation to the general manager's staff, showing last year's productivity figures, staffing and equipment configurations, and future needs for your operation. You want to clearly highlight the service you have provided and its cost effectiveness for the company. Will you need software?

COMPUTER BUSINESS APPLICATIONS I
Exercise 2-1

You will be tested over your knowledge of the hardware, software, peripherals, and other procedures with which you should be familiar in this course. Please take accurate and complete notes.

1. Hardware I will be using:

Name of computer: _____

Manufacturer: _____

Microprocessor: _____

Amount of memory: _____

Brand of monitor: _____

The keyboard has the following keys which are not on a typewriter:

_____ ____

_____

Name of printer: _____

Manufacturer: _____

Number of disk drives: 1 2

Circle one: Serial interface or parallel interface

2. Peripherals I will be using: Please circle your answer:

Mouse Light pen

Modem OCR

Other: _____

What special power up and power down procedures do I need to know regarding this(ese) peripheral(s)?

3. Software I will be using:

Word processing: _____
which requires _____ of memory.

Database management: _____
which requires _____ of memory.

Spreadsheet: _____
which requires _____ of memory.

Integrated: _____
which requires _____ of memory.

Graphics: _____
which requires _____ of memory.

Operating system: _____

Other: _____

4. Recording media I will be using: Circle your answer(s):

Floppy disk	Hard disk
Optical disk	Cassette
Magnetic tape reel	3 1/2" disk

5. Write the step-by-step procedure for powering up your computer, loading a software applications program, and powering down your computer. (Use the back of this sheet, if necessary.)

6. Write the procedure for checking out software.

7. Name of person offering assistance in lab or classroom:

_____

8. What are the hours that the equipment is available for use?

9. Write the step-by-step procedure for loading paper into the printer.

10. Write the step-by-step procedure for replacing the ribbon on the printer.

11. Where are supplies and documentation located?

12. List the do's and don't's of handling floppy diskettes.

13. What does the red light on the disk drive mean?

14. Why is power surge protection necessary on electronic equipment? What kind of power surge protection is provided on the equipment with which I will be working?

Suggested

SELF-EVALUATION SHEET

NAME: _____ DATE: _____

Name or # of Assignment: _____

No. of items due in assignment: _____

No. of items completed: _____

Possible points: 100

****

Self-Evaluation points:

50 Mailability: (0 if any errors. For mastery learning, correct and return until mailable; however, instructor will set the standard.) _____

Proofreading skills evaluated here.

20 Language arts, grammar, etc.: _____

20 Following directions for assignment and decision-making: _____

10 Arrangement, placement, spacing: _____

100 Possible points

TOTAL SELF-EVALUATION POINTS: _____

****

Comments: _____

_____

_____

_____

_____

****

COMPUTER BUSINESS APPLICATIONS

DIRECTIONS FOR EXERCISE 4-1

LEARNING OUTCOME: Formatting: Margins, line spacing, tabs.
Editing: Insert, delete, overstrike, store.
Proofreader's marks.
Letter styles: Student's choice.

1. Prepare your system to start a new document. If your system requires the name of the document at this point, assign the name EXERCISE 1.
2. Use a 60-space line, 5-space tab grid.
3. Read and correct the letter, using proofreaders' marks, before keyboarding. (For your convenience, proofreader's marks are attached.)
4. Keyboard the letter, correcting errors by inserting, deleting, overstriking, backspacing, or using tabs as necessary.
5. Proofread the letter on the video screen.
6. Store (save) the exercise, assigning the name EXERCISE 1.
7. Print one copy, following the procedure for your system.
8. Hand in three (3) items to your instructor to complete EXERCISE 1: the letter with proofreader's marks, your printed letter in mailable form (with all corrections made), and the self-evaluation form.

(A suggested self evaluation form is provided for students' use in the "Student Materials" section. It is critical that they be able to take an objective view of their own work; hence, the self evaluation. Instructors may also want to use the same format for formative evaluation purposes. In this way, students and instructors are using the same criteria for evaluation.)

(Today's date)

Dear ACT Member:

You are a member of an important group, dedicated to support Houston Public Television, and we appreciate that support. Because you are committed toquality television, we hope youwill consider this opportunity to expand your partnership with Channel 10.

Our Annual TeleAuction is one of Houston's most wxciting events. Involving over 3,5000 volunteers, this fundraising extravaganza has become an important part of Housto community life and a mianstay of funding for Channel 10 operations. Wehope you will become a part of this year's TeleAuction, which airs May 5 through May 14!

We are looking for art, antiques, collectables, new merchandize valued at $50.00 or more, travel opportunities, use of vacatio homes, and services. If your business wants to introduce a new merchandise line, promote your services, display a product, or put your companies' name before the public to show your committment to public television, consider donating to the Teleauction. It is the only fundraising effort that offers donors a chance to promtoe their bvusiness and services in exchange for there merchandise donations. What a terrific way to strethc your advertising dollar and support quality television for our comm8nity!

If you can heolp us with any of the above items please call us at 555-8888 or return the enclose card. We need your help, but let me asure you that thefiancial support you have already shown is deeply appreciated. Please continued that support.

Sincerely,

Lanier Whilton

Teleauction Chairman

xx (keyboarder's initials)

COMPUTER BUSINESS APPLICATIONS I

DIRECTIONS FOR EXERCISE 4-2

LEARNING OUTCOME:

Formatting: Margins, line spacing, tabs, inserting, backspacing, deleting, bolding, justification, moving copy.

Editing: Keying from corrected copy. Decisions to be made on how to correct and edit to produce mailable copy.

Proofreader's marks. Hint: Do not take for granted that all errors have been marked.

Letter style: Student's choice, SS.

1. Prepare your system to start a new document. If your system requires the name of the document at this point, assign the name EXERCISE 2.
2. Choose the appropriate line spacing for the document.
3. Keyboard the document, responding to the proofreaders' marks. (For your convenience, proofreader's marks are included with Exercise 1.)
4. Keyboard the letter, using the appropriate formatting and editing commands of your software.
5. Proofread the letter on the video screen.
6. Store (save) the exercise, assigning the name EXERCISE 2.
7. Print one copy, following the procedure for your system.
8. Hand in two (2) items to your instructor to complete EXERCISE 2: your printed letter in mailable form (with all corrections made), and the self-evaluation form.

(Today's Date)

Dr. Wanda D. McCarthy
University of Cincinnatti
4800 Calhoun
Dincinnatti, OH 770006

Dear Dr. McCarthy

I haven't mailed any promotional "stuff" out of my office for a long time, so I decided to bring you up-to-date. Enclosed is a press kit for your file.

I would like to extend a sincere thank youo for being in the student building business. We love you for it and appreciate the long hours and enormous time commitment yougive to hlep young people become the best they can be BPA is truly an exceptional organization because of people like you.

I have taken pride to prepare myself so that I mayfill more than one slot on a program. (Opening or closing keynote, workshops, and an advisors presentation.) This is COST EFFECTIVE for you. You save the expense of pyaing two or more full speakers fees and multiple travel expenses to get things done you want done right.

As you read thru the accompanying press kit, please not ehtat since 1980 I have been fortunate to speak to more

thanone million individuals in all 50 states, Canada, and in Europe. I have spoke at most state leadership conferences, and at everysingle on of the National, International, and Regional conferences of twelve of the fourteen National Student Organizations. If you've booked me in the past, remember thatmy material is fresh and different for everynew audience. Over 70% of my assignments are return engagements!

I look forward to hearing fro you soo. Togetrher we can make a good, clean, pure, powerful, postive, lasting difference! Call for references to just to chat.

Sincreely,

Dan Johnson

xx (keyboarder's initials)

COMPUTER BUSINESS APPLICATIONS I

DIRECTIONS FOR EXERCISES 4-3 A-E

LEARNING OUTCOME: **Formatting:** Recall documents to perform the following: Search and replace, insert, delete, reformat.

Editing: Make decisions on formatting, using the commands of your software and hardware.

1. Prepare your system to recall previously stored documents.
2. Recall the following exercises and make the changes indicated:

EXERCISE 1:

(a) Channel 10 should be changed to Channel 8 wherever mentioned in the letter.
(b) Indent the first line of each paragraph 5 spaces and doublespace the letter, making sure to keep it a one-page letter. (This may entail changing margins, fonts, etc.)
(c) Bold the word "you" throughout the document.
(d) Bold the word "ONLY" in paragraph 3.
(e) Store (save) the new document as EXERCISE 1A.

EXERCISE 2:

(a) Insert the following paragraph between paragraphs 2 and 3 in the letter, correcting the errors as you keyboard:

Eric Hoff er has said, "In times of change, learners inuyerit the earth,w hile th elearned find themselves beautifully equippped to deal with a world that no longer exists. We obviously share in this phiulosophy that continual learning and motivation are essential ingredients for success. For this reason, I hope you will consider me as a keynote speaker and seminar leader for your next conference.

(b) Bold the following words in the letter:

In paragraph 4: COST EFFECTIVE

(c) Bold the following:

In paragraph 5: Bold the sentence beginning "I have spoken..."

(d) Store (save) the new document as EXERCISE 2A.

(e) Replace the OEA designation in paragraph 2 with the following student organization designations and address the letter to the following people, as indicated: (You will produce 3 new letters, using the current date.)

Dr. Thomas C. Karmen (DECA)
University of Cincinatti
4800 Calhoun
Cincinatti, OH 77006

Dr. Marcella A. Goodson (DPE)
University of Cincinatti
4800 Calhoun
Cincinatti, OH 77006

Dr. Kenneth W. Henderson (OTT)
University of Cincinatti
4800 Calhoun
Cincinatti, OH 77006

(f) Save the new letters as EXERCISE 3A, EXERCISE 3B, AND EXERCISE 3C.

3. Proofread the changes and the letters on the video screen.
4. Print one copy of each new exercise, following the procedure for your system.
5. Hand in <u>six (6)</u> items to your instructor to complete EXERCISE 3: Exercise 1A with changes noted, using Exercise 1 as the original source. Exercise 2A with changes noted; and 3 new letters, Exercise 3A, Exercise 3B, and Exercise 3C, all of which use Exercise 2 as the original source; and your self evaluation.

COMPUTER BUSINESS APPLICATIONS I

DIRECTIONS FOR EXERCISE 4-4

LEARNING OUTCOME:

- .. Structure of an electronic spreadsheet
- .. Identify, label, and use parts of an electronic spreadsheet, including rows, columns, and cells
- .. Identify and define cell format, including formulas, values, and functions
- .. Format an electronic spreadsheet document from typewritten copy
- .. Edit document for errors
- .. Print document

1. Complete the tutorial or basic training guide that comes with your software (optional).
2. Given the sample electronic spreadsheet in Exercise 4, label the parts: rows, columns, cells, formulas, values, and functions.
3. Create a new electronic spreadsheet document, naming it (if appropriate to your system).
4. Keyboard in the Mileage Report data, making sure to include formulas for calculations that are required. Add a Car No. in the blank in cell F1. The electronic spreadsheet in Exercise 4 is set up in the following manner:

   Fill-up mpg = Miles/gallons
   Cumul mpg = Total miles/total gallons
   Quarterly cumul. mpg = Sum of miles/sum of gallons
   Quarterly fill-up mpg = sum of fill-up mpg/no.of fill-ups

5. Proofread the document on the video screen.
6. Store (save) the document, assigning the name MILEAGE REPORT.
7. Print one copy, following the procedure for your system.
8. Hand in three (3) items to your instructor to complete Exercise 4: the spreadsheet document with the labels, rows, columns, formulas, values, and functions labelled; a printed copy of the electronic spreadsheet you have entered in correct form and errorless; and your self evaluation. Do your calculations match the calculations on the original document?

MILEAGE REPORTS Car No. ____

Date	Miles	Gallons	Fill-up mpg	Cumul mp
October 6	8943.00			
October 18	9296.00	19.00	18.58	18.5
October 30	9643.00	20.00	17.35	17.9
November 7	9951.00	19.40	15.88	17.2
November 20	10296.00	18.30	18.85	17.6
December 1	10592.00	17.70	16.72	17.4
December 12	10966.00	20.10	18.61	17.6
December 21	11354.00	20.70	18.74	17.8
Quarterly totals	2411.00	135.20	17.82	17.8

COMPUTER BUSINESS APPLICATIONS I

DIRECTIONS FOR EXERCISE 4-5

LEARNING OUTCOME:

- .. Identify labels for cells
- .. Select and use appropriate editing functions to insert, delete, move, copy, search and find, and replace data in an electronic spreadsheet
- .. Use formatting techniques such as change column width, automatic recalculations, move rows and/or columns.

Complete the following exercises in the order given below. DO NOT work ahead.

1. Recall the electronic spreadsheet document, MILEAGE REPORT, to your screen.

2. Answer the following questions regarding the attached exercises which are labelled Exercise 4-5A through Exercise 4-5F:

   a) In which cell do the values apply for each of the six exercises?
   b) How is a value in one cell replicated in another?
   c) Underline the labels in each of the six exercises.
   d) What do the symbols @SUM, /, -, *, and + mean in spreadsheet formulas?
   e) How many spaces are available for the label of each column?
   f) What is the formula (value) for cell H11?
   g) What is a pointer? Name a cell which has a pointer.

3. Make the following changes in the spreadsheet, positioning the cursor in the appropriate cell and changing the numbers as indicated and press return. The numbers in the spreadsheet which are affected by the changed should be recalculated automatically:

   a) October 18 gallons should be 19.5.
   b) December 12 mileage should be 10968.
   c) December 21 mileage should be 11368.

4. Make the following additions to the spreadsheet, making sure to include the correct formulas for calculations that are required and maintaining the format of the report:

a) January 5 mileage is 11888; gallons are 20.10.
b) January 16 mileage is 12550; gallons are 21.00.
c) January 27 mileage is 13114; gallons are 20.25.
d) February 7 mileage is 13670; gallons are 19.75.
e) February 18 mileage is 14441; gallons are 20.15.
f) March 1 mileage is 15001; gallons are 19.80.
g) March 20 mileage is 15708; gallons are 21.00.
h) Calculate quarterly totals.
i) Calculate year-to-date totals. Figure out formulas and add to appropriate cells.
j) A Column D should be added, as follows:

Heading: Oil Changes

Dates of Oil Changes:

October 30: Yes (Cell D9)
Hint: Use search and find function.
January 16: Yes (Cell ?)
Use search and find function.
March 1: Yes (Cell ?)
Use search and find function.

Based on the information above, when should the next oil change take place? Write your answer to this question on the document after it is printed.

6. Proofread the document on the screen. Store (save) the document, assigning the name MILEAGE REPORT1, and print one copy. Use 1" top and bottom margins, .5" left and right margins.

7. After looking at the printed copy, you determine that Column D does not fit in very well with the format of the Mileage Report. Move Column D to Column I.

8. Store (save) the document as MILEAGE REPORT2.

9. Print one copy of the document, using the same margins as in #6 above.

10. Use Mileage Report (the original document) to create a template. Store (save) the template, assigning the name TEMPLATE 1. Print one copy of the template.

11. Turn in the following documents to your instructor to complete Exercise 4-5: Exercises 4-5A through 4-5F, Mileage Report1, Mileage Report2, Template 1, and your self evaluation.

Exercise 4-5A.

File: mileage report REVIEW/ADD/CHANGE Escape: Main Menu

MILEAGE REPORTS Car No. _____

	Date	Miles	Gallons	Fill-up mpg	Cumul. mpg
7	October 6	8943.00			
8	October 18	9296.00	19.00	18.58	18.58
9	October 30	9643.00	20.00	17.35	17.95
11	November 7	9951.00	19.40	15.88	17.26
12	November 20	10296.00	18.30	18.85	17.64
14	December 1	10592.00	17.70	16.72	17.47
15	December 12	10966.00	20.10	18.61	17.67
16	December 21	11354.00	20.70	18.74	17.83
18	Quarterly totals	2411.00	135.20	17.82	17.83

: (Value) +C8-C7/E8 Cell No. _____

Type entry or use @ commands @-? for Help

Exercise 4-5B.

File: mileage report REVIEW/ADD/CHANGE Escape: Main Menu

MILEAGE REPORTS Car No. _____

	Date	Miles	Gallons	Fill-up mpg	Cumul. mpg
7	October 6	8943.00			
8	October 18	9296.00	19.00	18.58	18.58
9	October 30	9643.00	20.00	17.35	17.95
11	November 7	9951.00	19.40	15.88	17.26
12	November 20	10296.00	18.30	18.85	17.64
14	December 1	10592.00	17.70	16.72	17.47
15	December 12	10966.00	20.10	18.61	17.67
16	December 21	11354.00	20.70	18.74	17.83
18	Quarterly totals	2411.00	135.20	17.82	17.83

: (Value) +G8 Cell No. _____

Type entry or use @ commands @-? for Help

Exercise 4-5C.

```
File: mileage report          REVIEW/ADD/CHANGE          Escape: Main Menu
========A========B========C========D========E========F========G========H=======
 1|                  MILEAGE REPORTS            Car No. _____
 2|
 4|                                                          Fill-up    Cumul.
 5|    Date              Miles          Gallons                 mpg       mpg
 6|
 7|October 6           8943.00
 8|October 18          9296.00            19.00               18.58     18.58
 9|October 30          9643.00            20.00               17.35     17.95
10|
11|November 7          9951.00            19.40               15.88     17.26
12|November 20        10296.00            18.30               18.85     17.64
13|
14|December 1         10592.00            17.70               16.72     17.47
15|December 12        10966.00            20.10               18.61     17.67
16|December 21        11354.00            20.70               18.74     17.83
17|
18|Quarterly
19|totals              2411.00           135.20               17.82     17.83
--------------------------------------------------------------------------------
  : (Value) +C11-C7/(E11+E9+E8)          Cell No. _________

Type entry or use @ commands                                  @-? for Help
```

Exercise 4-5D.

```
File: mileage report          REVIEW/ADD/CHANGE          Escape: Main Menu
========A========B========C========D========E========F========G========H=======
 1|                  MILEAGE REPORTS            Car No. _____
 2|
 5|    Date              Miles          Gallons                 mpg       mpg
 6|
 7|October 6           8943.00
 8|October 18          9296.00            19.00               18.58     18.58
 9|October 30          9643.00            20.00               17.35     17.95
10|
11|November 7          9951.00            19.40               15.88     17.26
12|November 20        10296.00            18.30               18.85     17.64
13|
14|December 1         10592.00            17.70               16.72     17.47
15|December 12        10966.00            20.10               18.61     17.67
16|December 21        11354.00            20.70               18.74     17.83
17|
18|Quarterly
19|totals              2411.00           135.20               17.82     17.83
20|
--------------------------------------------------------------------------------
  : (Value) @SUM(E8...E16)      Cell No. _________

Type entry or use @ commands                                  @-? for Help
```

Exercise 4-5E.

```
File: mileage report          REVIEW/ADD/CHANGE          Escape: Main Menu
========A========B========C========D========E========F========G========H========
 1|                  MILEAGE REPORTS          Car No. _____
 2|
 5|    Date              Miles          Gallons              mpg       mpg
 6|
 7|October 6           8943.00
 8|October 18          9296.00            19.00            18.58     18.58
 9|October 30          9643.00            20.00            17.35     17.95
10|
11|November 7          9951.00            19.40            15.88     17.26
12|November 20        10296.00            18.30            18.85     17.64
13|
14|December 1         10592.00            17.70            16.72     17.47
15|December 12        10966.00            20.10            18.61     17.67
16|December 21        11354.00            20.70            18.74     17.83
17|
18|Quarterly
19|totals              2411.00           135.20            17.82     17.83
20|
--------------------------------------------------------------------------------
   : (Value) @SUM(G8...G16)/7      Cell No. _______

Type entry or use @ commands                                  @-? for Help
```

Exercise 4-5F.

```
File: mileage report          REVIEW/ADD/CHANGE          Escape: Main Menu
========A========B========C========D========E========F========G========H========
 1|                  MILEAGE REPORTS          Car No. _____
 2|
 5|    Date              Miles          Gallons              mpg       mpg
 6|
 7|October 6           8943.00
 8|October 18          9296.00            19.00            18.58     18.58
 9|October 30          9643.00            20.00            17.35     17.95
10|
11|November 7          9951.00            19.40            15.88     17.26
12|November 20        10296.00            18.30            18.85     17.64
13|
14|December 1         10592.00            17.70            16.72     17.47
15|December 12        10966.00            20.10            18.61     17.67
16|December 21        11354.00            20.70            18.74     17.83
17|
18|Quarterly
19|totals              2411.00           135.20            17.82     17.83
20|
--------------------------------------------------------------------------------
   : (Value) +C16-C7/(E16+E15+E14+E12+E11+E9+E8)      Cell No. _______

Type entry or use @ commands                                  @-? for Help
```

COMPUTER BUSINESS APPLICATIONS I

DIRECTIONS FOR EXERCISE 4-6

LEARNING OUTCOME:

- Given labels, values, and data, create a spreadsheet document.
- Justify labels or values.
- Set decimal positions.
- Freeze or unfreeze horizontal and/or vertical titles.
- Replicate cell definitions from one location to another in the spreadsheet as either a relative or absolute replication.

1. Prepare your system to create a new spreadsheet document.

2. From the attached information, create a spreadsheet, using the functions of @SUM and @AVG.

3. Right justify the headings over the columns; add the name GRADE SHEET FOR PRINCIPLES OF TEACHING, Spring 19xx to the top of the spreadsheet. Freeze the title. Set up the column widths as appropriate for each column.

4. Enter the column headings (tests and observations) and row headings (students' names).

5. Set up the formulas for adding up and averaging the grades to go in the Average column. Replicate the average in the Grade column.

6. Key in the information in each cell, setting up the decimal position as appropriate.

7. Store (save) the document as GRADE SHEET.

8. Print one copy of the document.

9. Turn in one copy of the GRADE SHEET exercise and your self evaluation to your instructor.

File: gradesheet

Class:

Student #	Obser #1	Obser #2	Obser #3	Book Rep 1	Mid-Term	Final	Course Grade
F45260615	85	85	80	89	88	90	86
M55567890	85	85	95	100	95	92	92
J23467908	89	95	90	85	88	95	90
M23456790	85	90	90	90	91	98	91
Q09834578	80	85	90	80	68	88	82
H12309856	85	90	95	85	88	84	88
A12309856	65	75	95	89	72	92	81
B75354098	85	89	85	95	95	90	90
C65438709	80	85	75	95	87	87	85
P34598723	80	85	85	90	86	92	86
E87943590	70	90	85		89	92	85
J53480912	89	90	85	80	87	89	87
D56489451	90	90	100	100	87	90	93
Y54379812	80	80	90	95	76	94	86
V58768789	75	85	95	85	57	81	80
X68735647	95	89	95	100	95	80	92
T56780466	80	90	90	85	93	91	88
P65489873	80	89	90	95	81	87	87
R63540764	89	90	100	90	95	92	93
H65987346	80	90	85	100	87	89	88
I54300967	80		80	95	90	93	88
K34560987	70		75	80	62	85	74
O35460987	75			80	98		84
L67678900	75	80	85	85	44	90	76

COMPUTER BUSINESS APPLICATIONS I

DIRECTIONS FOR EXERCISE 4-7

LEARNING OUTCOME:

- .. Structure of an electronic database management file
- .. Identify, label, and use structure of a database management file, including fields, records, files, and the database
- .. Create, open, and name a database file
- .. Enter accurately, with the proper techniques, field names, field entries, commands, report headings
- .. Edit document for errors and formatting
- .. Print document(s)

1. Complete the tutorial or basic training guide that comes with your software (optional).

2. Use the sample database management file in Exercise 7 to identify the entries, fields, records, and files.

3. Create the database document, naming it (if appropriate to your system).

4. Keyboard in the EQUIPMENT INVENTORY REPORT, making sure to use the appropriate field names. Use the basic editing functions to insert, delete, move, copy, search and find, and replace as appropriate for all documents in this exercise.

5. Proofread the documents on the video screen.

6. Store (save) the document, assigning the name EQUIPMENT INVENTORY REPORT.

7. Print one copy, setting up the report format to duplicate the report from which you are keyboarding. Follow the procedure for printing a document on your system.

8. Recall the stored document, EQUIPMENT INVENTORY REPORT, to your screen and reformat the EQUIPMENT INVENTORY REPORT, using the following instructions:

a) A list of computers only which includes the following fields: Computer, Serial # of Computer, Room #, Person, Computer Model, and date installed. Name this report EQUIPMENT INVENTORY 1.

b) A list of printers only which includes the following fields: Printer, Serial # of Printer, Room #, Person, and date installed. Name this report EQUIPMENT INVENTORY 2.

c) A list of monitors only which includes the following fields: Monitor, Serial # of Monitor, Room #, Person, and date installed. Name this report EQUIPMENT INVENTORY 3.

d) A list of equipment by location (Room #), including the following fields: Computer, Monitors, Printers, Person, and date installed. Name this report EQUIPMENT INVENTORY 4.

e) A list of equipment by name (Person), including the following fields: Room #, Computer, Monitors, Printers, and date installed. Name this report EQUIPMENT INVENTORY 5.

9. Print one copy of all the reports, following the procedure for printing on your system.

10. If you are using integrated software, create a letter into which either Equipment Inventory Report 4 or Equipment Inventory Report 5 is included.

11. Hand in <u>seven (7)</u> items to your instructor to complete Exercise 7: EQUIPMENT INVENTORY REPORT, EQUIPMENT INVENTORY REPORT 1, EQUIPMENT INVENTORY REPORT 2, EQUIPMENT INVENTORY REPORT 3, EQUIPMENT INVENTORY 4, and EQUIPMENT INVENTORY REPORT 5, and your self evaluation. (If you are using integrated software, you will turn in <u>eight (8)</u> items [the letter].)

File: COMPBUSAPPL.I
Report: Equipment Inventory

Computer: IBM-XT
Monitors: IBM
Printers: C.ITOH F-10
Ser # Comp: 6105588
Ser # Mon: 0078044
Ser # Print: BJ19BU
Ser # Keyb:
Room #: F-203
Person: Computer Center
Printer Model: Starwriter
Computer Model: 089 w/AST
Date Installed: Feb 4 86

Computer: IBM-XT
Monitors: IBM
Printers: Quietwriter
Ser # Comp: 6106358
Ser # Mon: 6021482
Ser # Print:4021126
Ser # Keyb:
Room #: F-203
Person: Carol Bratton
Printer Model: Model 2
Comp Model: 089 w/Tecmar
Date Installed: Feb 4 86

Computer: IBM
Monitors: IBM
Printers: Quietwriter
Ser # Comp: 1922985
Ser # Mon: 3835997
Ser # Print: 4032844
Ser # Keyb:
Room #: F-206
Person: Laurie Riorden
Printer Model: Model 2
Computer Model: 176
Date Installed: Aug 26 86

Computer: IBM-XT
Monitors: Amdek
Printers: Quietwriter
Ser # Comp: 6475483
Ser # Mon: 6133835
Ser # Print: 0141468
Ser # Keyb:
Room #: F-206
Person: Jo Ann Cottrell
Printer Model:
Computer Model: 089
Date Installed: Mar 10 86

File: COMPBUSAPPL.I
Report: Equipment Inventory

Computer: IBM-XT
Monitors: IBM
Printers: Quietwriter
Ser # Comp: 2041544
Ser # Mon: 3674209
Ser # Print: 0138545
Ser # Keyb:
Room #: F-207
Person: Nancy Owen
Printer Model:
Computer Model: 089 Mtn Tape Backup
Date Installed: Jun 5 86

Computer: IBM-XT
Monitors: IBM
Printers: Quietwriter
Ser # Comp: 6115690
Ser # Mon: 3674159
Ser # Print: 0145376
Ser # Keyb:
Room #: F-209
Person: Maria Hooker
Printer Model:
Computer Model: 089 w/AST
Date Installed: Feb 4 86

Computer: IBM-XT
Monitor: Amdek
Printers: Quietwriter
Ser # Comp: 6114849
Ser # Mon: 6231054
Ser # Print: 0139606
Ser # Keyb:
Room #: F-213
Person: Margene Boorde
Printer Model:
Computer Model: 089 w/AST
Date Installed: Feb 4 86

Computer: IBM-XT
Monitors: IBM
Printer: Quietwriter
Ser # Comp: 6115608
Ser # Mon: 3674234
Ser # Print:0140944
Ser # Keyb:
Room #: F-213
Person: Sherry Lindsey
Printer Model:
Computer Model: 089 w/AST
Date Installed: Feb 4 86

File: COMPBUSAPPL.I
Report: Equipment Inventory

Computer: IBM-XT
Monitors: Amdek
Printers: Wheelwriter
Ser # Comp: 4283981
Ser # Mon: 6390470
Ser # Print: 11-G6679
Ser # Keyb:
Room #: F-7
Person: Louise Emfinger
Printer Model:
Computer Model: Hercules Card
Date Installed: Dec 11 86

Computer: IBM-XT
Monitors: Amdek
Printers: Quietwriter
Ser # Comp: 6468635
Ser # Mon: 6150111
Ser # Print: 4021034
Ser # Keyb:
Room #: F-202
Person: Joyce Lemaster
Printer Model:
Computer Model: 089
Date Installed: Mar 10 86

Computer: Sanyo 555
Monitors: Sanyo
Printers: C.ITOH F-10
Ser # Comp: 14838502
Ser # Mon: 11164721 23073
Ser # Print: BJ19BU
Ser # Keyb:
Room #: F-203
Person: Computer Center
Printer Model: Starwriter
Computer Model:
Date Installed:

Computer: IBM-XT
Monitors: IBM
Printers: Quietwriter
Ser # Comp: 6121203
Ser # Mon: 6013888
Ser # Print: 0145083
Ser # Keyb:
Room #: S-218
Person: Barbara Lawton
Printer Model:
Computer Model: 089 w/AST
Date Installed: Feb 4 86

File: COMPBUSAPPL.I
Report: Equipment Inventory

Computer: IBM-XT
Monitors: Amdek
Printers: Quietwriter
Ser # Comp: 2041616
Ser # Mon: 6231010
Ser # Print: 4043591
Ser # Keyb:
Room #: S-218
Person: Jean Bell
Printer Model: Model 2
Computer Model: 089
Date Installed: Mar 10 87

Computer: IBM-XT
Monitors: IBM
Printers: Quietwriter
Ser # Comp: 6110894
Ser # Mon: 3674259
Ser # Print: 0137291
Ser # Keyb:
Room #: F-220
Person: Judy Ates
Printer Model:
Computer Model: 089 w/AST
Date Installed: Feb 4 86

Computer: IBM-XT
Monitors: IBM
Printers: Quietwriter
Ser # Comp: 6116030
Ser # Mon: 3674176
Ser # Print: 0046980
Ser # Keyb:
Room #: F-213
Person: Donna Collins
Printer Model:
Computer Model: 089 w/AST
Date Installed: Feb 4 86

Computer: IBM-XT
Monitors: Amdek
Printers: Quietwriter
Ser # Comp: 6121357
Ser # Mon: 6231231
Ser # Print: 0140932
Ser # Keyb:
Room #: F-215
Person: D'Anne Willis
Printer Model:
Computer Model: 089 w/AST
Date Installed: Feb 4 86

File: COMPBUSAPPL.I
Report: Equipment Inventory

Computer: IBM-XT
Monitors: IBM
Printers: Quietwriter
Ser # Comp: 2040656
Ser # Mon: 3677032
Ser # Print: 0141915
Ser # Keyb:
Room #: F-215
Person: Rachel Warren
Printer Model:
Computer Model: 089 w/Networking
Date Installed: Jul 9 86

Computer: IBM
Monitors: IBM
Printers: Quietwriter
Ser # Comp: 72-1062190
Ser # Mon: 72-0137487
Ser # Print: 11-702-6013
Ser # Keyb: 201-6056
Room #: S-220
Person: Cheryl Chambers
Printer Model: Model 3
Computer Model: Personal System 2
Date Installed: Aug 20 87

Computer: IBM-XT
Monitors: Amdek
Printers: Quietwriter
Ser # Comp: 4283833
Ser # Mon: 6390081
Ser # Print: 0113073
Ser # Keyb:
Room #: S-222
Person: Michelle Reid
Printer Model:
Computer Model: Hercules Card
Date Installed: Jan 5 87

Computer: IBM-XT
Monitors: Amdek
Printers: quietwriter
Ser # Comp: 4284365
Ser # Mon: 6390166
Ser # Print: 0112018
Ser # Keyb:
Room #: S-224
Person: Nanatte Lites
Printer Model:
Computer Model: Hercules Card
Date Installed: Jan 5 87

File: COMPBUSAPPL.I
Report: Equipment Inventory

Computer: IBM-XT
Monitors: Amdek
Printers: Quietwriter
Ser # Comp: 2036716
Ser # Mon: 6313757
Ser # Print: 0126353
Ser # Keyb:
Room #: S-228
Person: Pat Garland
Printer Model:
Computer Model: 089 w/Mountain Tape Backup
Date Installed: Oct 30 86

Computer: IBM-XT
Monitors: Amdek
Printers: Quietwriter
Ser # Comp: 4283319
Ser # Mon: 6321456
Ser # Print: 0160017
Ser # Keyb:
Room #: S-228
Person: Gloria Wells
Printer Model:
Computer Model: Hercules Card
Date Installed: Jan 5 87

COMPUTER BUSINESS APPLICATIONS I

DIRECTIONS FOR EXERCISE 4-8

LEARNING OUTCOME:

- Determine the best method for dissemination of word processing, database, and spreadsheet documents
- Identify the necessary equipment for dissemination of word processing, database, and spreadsheet documents
- Demonstrate how to operate facsimile, modems, or other information distribution devices which may be available in the classroom for disseminating documents

How would you...

1. make traditional distribution of information to persons outside the organization?

   _____
   _____

2. send a document overnight for next morning delivery?

   _____
   _____

3. send a document for next day delivery?

   _____
   _____

4. deliver a document to a manager in another city who has called you at 9:00 a.m. for delivery by 1:00 p.m.?

   _____
   _____

5. deliver information to an employee in another department who has come for the document in person?

   _____
   _____

6. deliver a document to your supervisor who is overseas and needs it for a meeting the next morning?

_____
_____

7. receive a document from your supervisor which needs revision and return it to him/her for approval while he/she is either out of the city or out of the country?

_____
_____

8. deliver information to an employee in another department who has called you on the telephone?

_____
_____

9. deliver a message from one colleague to another colleague who is out of the office but who needs the information when he/she returns?

_____
_____

10. obtain information for your supervisor from another branch office in your company for a 2:00 p.m. meeting (and it is 1:00 p.m.)?

_____
_____

11. obtain information for your supervisor from an office in another division of the company in a city 500 miles away for a 10:00 a.m. meeting (it is 8:30 a.m.)?

_____
_____

12. leave a message for another colleague to call you when he/she returns: traditionally? or electronically?

_____
_____

13. receive a message from another colleague when <u>you</u> are out of the office: traditionally? or electronically?

_____
_____

Computer Business Applications I

course one

Evaluation

•INFORMATIONSYSTEMSCURRICULUM•INFORMATIONSYSTEMSCURRICULUM•INFORMATIONSYSTEMSCURRICULUM•

COMPUTER BUSINESS APPLICATIONS I

TEST 1

1. Two factors are having a tremendous impact on the office:

   _____

   and the _____.

2. The traditional office may be defined as: _____

   _____

   _____

   _____.

   Some other characteristics of the traditional office include: _____

   _____

   _____

   _____.

3. In contrast, the automated office may be defined as:

   _____

   _____

   _____

   _____.

4. What is "sociotechnical analysis"? What is its importance to the automated office?

   _____

   _____

   _____

   _____

   _____

   _____

   _____

5. Professional workstations are: _____

   _____

   _____

   _____

   _____.

   Some of the automated office functions which may be performed at a professional workstation include:

   _____

   _____

   _____

   _____

   _____.

6. What is information? _____

   _____

   _____.

Why is it the "business of the office"?

7. Illustrate figuratively and label the information processing triangle on the back of this page.

8. Name and define each element of the triangle:

Define the new element that has been added to the word processing element and what kind of impact will this element have on information processing?

9. Information processing can be defined as:

10. Define the five elements of the information processing cycle:

input: _____

output: _____

storage/retrieval: _____

processing: _____

distribution: _____

11. Name and define the more common input devices?

12. Name and define the more common output devices.

13. List and define recording media.

14. Telecommunications vocabulary:

15. Define the term operating system.

16. Name some of the more common operating systems and the strengths/weaknesses and similarities/differences in each of them.

PC-DOS:

MS-DOS:

CP/M:

Unix:

OS/2:

ProDos:

Others:

17. Define hardware.

18. What do the following terms have to do with computers?

chip: _____

internal processor: _____

RAM: _____

ROM: _____

EPROM: _____

PROM: _____

Motherboard: _____

monitor: _____

CRT: _____

VDT: _____

LCD: _____

Gas plasma display: _____

Electroluminescent display: _____

Flat-panel display: _____

keyboard: _____

mainframe: _____

minicomputer: _____

microcomputer: _____

dedicated or stand-alone computer: _____

modem: _____

black box: _____

peripherals: _____

19. Define <u>software</u>.

20. What are the purposes of the following software?

word processing: _____

spreadsheet: _____

database management: _____

graphics: _____

forms management: _____

accounting: _____

desktop management: _____

records management/inventory: _____

electronic mail: _____

communications: _____

integrated: _____

21. Define the following terms as they relate to data processing:

bit: _____

byte: _____

megabyte: _____

K: _____

gigabyte: _____

1's and 0's: _____

character: _____

BASIC: _____

COBOL: _____

Fortran: _____

I/O functions: _____

program: _____

22. Define information systems.

_____

COMPUTER BUSINESS APPLICATIONS I

TEST 2

From the descriptions of office problems and/or situations given below, please indicate the software which might provide a solution or benefit to the situation. Be specific and explain why you think that software would be beneficial.

a. You are administrative assistant to a dress manufacturing company. Your manager has told you that it is time for yearly salary reviews for employees in the department. Each manager has been given an amount of money to spend on salary increases. You need to provide your manager with the performance records and current salaries for each employee so that salary increase percentages can be determined. In addition, you must calculate the salary totals based on the projected percentages for three different salary ranges. Which software, if any, would you use in this situation?

_____

_____

_____

_____

_____

b. You work for the Admissions Officer of a large state university. Your office receives a large number of applications for admission for each school term: fall, spring, and summer. You and your supervisor (the Admissions Officer) make decisions about which students to accept and which to reject. Your job is to examine the applications of students who had high school grade point averages of 2.8 and above. Which software, if any, would you use in this situation?

_____

_____

_____

_____

_____

c. Your job as administrative assistant to the manager of your company is to provide a daily, weekly, and monthly calendar of events. Your manager has an executive workstation; you have an administrative workstation. Which software, would you use in this situation? And what other activities might you do with this software?

_____

_____

_____

_____

_____

d. You are the senior production clerk in a chemical complex which is the largest in the southwest. You work in one of the largest production units in the complex. Your supervisor is the superintendent who maintains an extremely busy schedule. Each morning you must transmit the previous day's production record to your superintendent's boss, the manager, and to the Production Scheduling office for the entire chemical complex. The information you need is accessed by way of the PDP-11 on to your terminal (this is a computer which monitors and adjusts the processes in the plant). Which software would you use to transfer the production information to the manager's office and to the central facility?

_____

_____

_____

_____

_____

e. You are an assistant for a claims adjuster for an insurance company. You have just received a call from your supervisor (the claims adjuster) saying that he/she must inspect the scene of a fire for a policyholder. This has interfered with a meeting that he/she had scheduled with another colleague in another department. The claims adjuster asks you to inform the colleague of the cancellation of the meeting and to reschedule the meeting. A computer terminal with a modem is available in both offices. Which software would you use?

_____

_____

_____

_____

_____

f. You are a sales marketing representative for a telecommunications company. You are frequently gone from your office to do training for new clients. It is important to receive telephone messages while you are out of the office and to let callers know when you will return. Is there software applications programs or something else to solve your problem?

_____

_____

_____

_____

_____

g. You work for the technical sales manager for a large drilling mud company, who is frequently out of the country. You need to send orders and requests for service to him/her while he/she is out of the country. This information must be received promptly; the responses must be noted as promptly. Can you use applications software to help you? Or is there something else which also might be helpful?

_____

_____

_____

_____

_____

h. In the same position as "g" above, the technical sales manager also negotiates contracts which must be drafted using a standardized format, signed, and notarized by lawyers at the United States location and then returned to the technical sales manager wherever the location. Is there a way this can be done with software? Is the returned document considered "legal" and binding? Is there other equipment which also might be used?

_____

_____

_____

_____

_____

i. You are the Information Processing Center Supervisor for an oil exploration company. You have been asked to make a presentation to the general manager's staff, showing last year's productivity figures, staffing and equipment configurations, and future needs for your operation. You want to clearly highlight the service you have provided and its cost effectiveness for the company. Will you need software?

COMPUTER BUSINESS APPLICATIONS I

TEST 3

This is a test of your knowledge of the hardware, software, peripherals, and other procedures with which you should be familiar in this course. This test must be passed with 100% accuracy.

1. Hardware I will be using:

   Name of computer: _____

   Manufacturer: _____

   Microprocessor: _____

   Amount of memory: _____

   Brand of monitor: _____

   The keyboard has the following keys which are not on a typewriter:

   _____

   _____

   Name of printer: _____

   Manufacturer: _____

   Number of disk drives: 1 2

   Circle one: Serial interface or parallel interface

2. Peripherals I will be using: Please circle your answer:

   Mouse Light pen

   Modem OCR

   Other: _____

   What special power up and power down procedures do I need to know regarding this(ese) peripheral(s)?

3. Software I will be using:

Word processing: _____
which requires _____ of memory.

Database management: _____
which requires _____ of memory.

Spreadsheet: _____
which requires _____ of memory.

Integrated: _____
which requires _____ of memory.

Graphics: _____
which requires _____ of memory.

Operating system: _____

Other: _____

4. Recording media I will be using: Circle your answer(s):

Floppy disk	Hard disk
Optical disk	Cassette
Magnetic tape reel	3-1/2" disk

5. Write the step-by-step procedure for powering up your computer, loading a software applications program, and powering down your computer. (Use the back of this sheet, if necessary.)

6. Write the procedure for checking out software.

7. Name of person offering assistance in lab or classroom:

_____

8. What are the hours that the equipment is available for use?

9. Write the step-by-step procedure for loading paper into the printer.

10. Write the step-by-step procedure for replacing the ribbon on the printer.

11. Where are supplies and documentation located?

12. List the do's and don't's of handling floppy diskettes.

13. What does the red light on the disk drive mean?

14. Why is power surge protection necessary on electronic equipment? What kind of power surge protection is provided on the equipment with which I will be working?

COMPUTER BUSINESS APPLICATIONS I

TEST 4 - Hands-On Test

1. Set up five stations in the classroom or laboratory on which to give this test. REMEMBER: 100% ACCURACY.

2. At Station #1, ask students to identify the pieces of equipment which are numbered. Provide a worksheet to be completed which will ask the name of the computer, manufacturer's name, name of printer, manufacturer's name, amount of memory in computer, microprocessor, type of printer interface (serial or parallel), etc., in addition to the other equipment to be identified.

3. At Station #2, ask students to demonstrate the correct procedures for powering up the equipment. Observe proper handling of disk drives.

4. At Station #3, ask students to demonstrate the correct procedures for loading a software program into the computer, demonstrating proper handling of floppy diskettes. Provide a worksheet to be completed which will identify the names of the software programs used in the course.

5. At Station #4, ask students to demonstrate the correct procedures for powering down the equipment.

6. At Station #5, ask students to respond to the following questions:

   State the procedures for checking out software.

   What are the hours that the equipment is available for use?

   Demonstrate the step-by-step procedure for loading paper into the printer.

   Demonstrate the step-by-step procedure for replacing the ribbon on the printer.

   State where supplies and documentation are located.

   State why power surge protection is necessary on electronic equipment. State what kind of power surge protection is provided on the equipment with which they will be working.

   Others questions, as appropriate.

7. The class should be divided into five groups, with each group starting at a different station.

Suggested

EVALUATION SHEET

NAME: _____ DATE: _____

Name or # of Assignment: _____

No. of items due in assignment: _____

No. of items completed: _____

Possible points: 100

****

Evaluation points:

50 Mailability: (0 if any errors. For mastery learning, correct and return until mailable; however, instructor will set the standard.) _____

Proofreading skills evaluated here.

20 Language arts, grammar, etc.: _____

20 Following directions for assignment and decision-making: _____

10 Arrangement, placement, spacing: _____

100 Possible points

TOTAL EVALUATION POINTS: _____

****

Comments: _____

_____

_____

_____

_____

****

(Suggested solution to Exercise 4-1).

(Today's date)

Dear ACT Member:

You are a member of an important group, dedicated to support Houston Public Television, and we appreciate that support. Because you are committed to quality television, we hope you will consider this opportunity to expand your partnership with Channel 10.

Our Annual TeleAuction is one of Houston's most exciting events. Involving over 3,500 volunteers, this fund-raising extravaganza has become an important part of Houston community life and a mainstay of funding for Channel 10 operations. We hope you will become a part of this year's TeleAuction, which airs May 5 through May 14!

We are looking for art, antiques, collectibles, new merchandise valued at $50.00 or more, travel opportunities, use of vacation homes, and services. If your business wants to introduce a new merchandise line, promote your services, display a product, or put your company's name before the public to show your commitment to public television, consider donating to the TeleAuction. It is the only fund-raising effort that offers donors a chance to promote their business and services in exchange for their merchandise donations. What a terrific way to stretch your advertising dollar and support quality television for our community!

If you can help us with any of the above items please call us at 555-8888 or return the enclosed card. We need your help, but let me assure you that the financial support you have already shown is deeply appreciated. Please continue that support.

Sincerely,

Lanier Whilton
TeleAuction Chairman

xx (keyboarder's initials)

(Suggested solution to Exercise 4-2.)

(Today's Date)

Dr. Wanda D. McCarthy
University of Cincinnati
4800 Calhoun
Cincinnati, OH 77006

Dear Dr. McCarthy

I haven't mailed any promotional "stuff" out of my office for a long time, so I decided to bring you up-to-date.. Enclosed is a press kit for your file.

I would like to extend a sincere thank you for being in the student building business. We love you for it and appreciate the long hours and enormous time commitment you give to help young people become the best they can be. BPA is truly an exceptional organization because of people like you.

I have taken pride to prepare myself so that I may fill more than one slot on a program. (Opening or closing keynote, workshops, and an advisor's presentation.) This is COST EFFECTIVE for you. You save the expense of paying two or more full speakers' fees and multiple travel expenses to get things done you want done right.

As you read through the accompanying press kit, please note that since 1980 I have been fortunate to speak to more than one million individuals in all 50 states, Canada, and in Europe. I have spoken at most state leadership conferences, and at every single one of the National, International, and Regional conferences of twelve of the fourteen National Student Organizations. If you've booked me in the past, remember that my material is fresh and different for every new audience. Over 70% of my assignments are return engagements!

I look forward to hearing from you soon. Together we can make a good, clean, pure, powerful, positive, lasting difference! Call for references or just to chat.

Sincerely

Dan Johnson

xx (keyboarder's initials)

Enclosure

(Today's date) (SUGGESTED SOLUTION TO EXERCISE 4-3A.)

Dear ACT Member:

You are a member of an important group, dedicated to support Houston Public Television, and we appreciate that support. Because you are committed to quality television, we hope you will consider this opportunity to expand your partnership with Channel 8.

Our Annual TeleAuction is one of Houston's most exciting events. Involving over 3,500 volunteers, this fund-raising extravaganza has become an important part of Houston community life and a mainstay of funding for Channel 8 operations. We hope you will become a part of this year's TeleAuction, which airs May 5 through May 14!

We are looking for art, antiques, collectibles, new merchandise valued at $50.00 or more, travel opportunities, use of vacation homes, and services. If your business wants to introduce a new merchandise line, promote your services, display a product, or put your company's name before the public to show your commitment to public television, consider donating to the TeleAuction. It is the only fund-raising effort that offers donors a chance to promote their business and services in exchange for their merchandise donations. What a terrific way to stretch your advertising dollar and support quality television for our community!

If you can help us with any of the above items please call us at 555-8888 or return the enclosed card. We need your help, but let me assure you that the financial support you have already shown is deeply appreciated. Please continue that support.

Sincerely,

Lanier Whilton, TeleAuction Chairman

(Today's Date) (SUGGESTED SOLUTION TO EXERCISE 4-3B.)

Dr. Wanda D. McCarthy
University of Cincinnati
4800 Calhoun
Cincinnati, OH 77006

Dear Dr. McCarthy

I haven't mailed any promotional "stuff" out of my office for a long time, so I decided to bring you up-to-date. Enclosed is a press kit for your file.

I would like to extend a sincere thank you for being in the student building business. We love you for it and appreciate the long hours and enormous time commitment you give to help young people become the best they can be. BPA is truly an exceptional organization because of people like you.

Eric Hoffer has said, "In times of change, learners inherit the earth, while the learned find themselves beautifully equipped to deal with a world that no longer exists." We obviously share in this philosophy that continual learning and motivation are essential ingredients for success. For this reason, I hope you will consider me as a keynote speaker and seminar leader for your next conference.

I have taken pride to prepare myself so that I may fill more than one slot on a program. (Opening or closing keynote, workshops, and an advisor's presentation.) This is COST EFFECTIVE for you. You save the expense of paying two or more full speakers' fees and multiple travel expenses to get things done you want done right.

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I look forward to hearing from you soon. Together we can make a good, clean, pure, powerful, positive, lasting difference! Call for references or just to chat.

Sincerely

Dan Johnson

Enclosure

(Today's Date) (SUGGESTED SOLUTION TO EXERCISES 4-3 C-E.)

Dr. Wanda D. McCarthy
University of Cincinnati
4800 Calhoun
Cincinnati, OH 77006

Dear Dr. McCarthy

I haven't mailed any promotional "stuff" out of my office for a long time, so I decided to bring you up-to-date. Enclosed is a press kit for your file.

I would like to extend a sincere thank you for being in the student building business. We love you for it and appreciate the long hours and enormous time commitment you give to help young people become the best they can be. BPA is truly an exceptional organization because of people like you.

Eric Hoffer has said, "In times of change, learners inherit the earth, while the learned find themselves beautifully equipped to deal with a world that no longer exists." We obviously share in this philosophy that continual learning and motivation are essential ingredients for success. For this reason, I hope you will consider me as a keynote speaker and seminar leader for your next conference.

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As you read through the accompanying press kit, please note that since 1980 I have been fortunate to speak to more than one million individuals in all 50 states, Canada, and in Europe. I have spoken at most state leadership conferences, and at every single one of the National, International, and Regional conferences of twelve of the fourteen National Student Organizations. If you've booked me in the past, remember that my material is fresh and different for every new audience. Over 70% of my assignments are return engagements!

I look forward to hearing from you soon. Together we can make a good, clean, pure, powerful, positive, lasting difference! Call for references or just to chat.

Sincerely

Dan Johnson

xx (keyboarder's initials)

Enclosure
(Same letter to 3 individuals w/changes for Exercises 4-3 C, D, E.)

COMPUTER BUSINESS APPLICATIONS I - Suggested solution to Exercise 4-4.

MILEAGE REPORTS Car No. 282

Date	Miles	Gallons	Fill-up mpg	Cumul mp
October 6	8943.00			
October 18	9296.00	19.00	18.58	18.5
October 30	9643.00	20.00	17.35	17.9
November 7	9951.00	19.40	15.88	17.2
November 20	10296.00	18.30	18.85	17.6
December 1	10592.00	17.70	16.72	17.4
December 12	10966.00	20.10	18.61	17.6
December 21	11354.00	20.70	18.74	17.8
Quarterly totals	2411.00	135.20	17.82	17.8

Exercise 4-5A. (Solution)

File: mileage report REVIEW/ADD/CHANGE Escape: Main Menu

```
=========A========B========C========D========E========F========G========H====
  1|                  MILEAGE REPORTS            Car No. _____
  2|
  4|                                                        Fill-up   Cumul.
  5|    Date                Miles          Gallons            mpg       mpg
  6|
  7|October 6            8943.00
  8|October 18           9296.00            19.00           18.58     18.58
  9|October 30           9643.00            20.00           17.35     17.95
 10|
 11|November 7           9951.00            19.40           15.88     17.26
 12|November 20         10296.00            18.30           18.85     17.64
 13|
 14|December 1          10592.00            17.70           16.72     17.47
 15|December 12         10966.00            20.10           18.61     17.67
 16|December 21         11354.00            20.70           18.74     17.83
 17|
 18|Quarterly
 19|totals               2411.00           135.20           17.82     17.83
```

G8: (Value) +C8-C7/E8

Type entry or use @ commands @-? for Help

Exercise 4-5B. (Solution)

File: mileage report REVIEW/ADD/CHANGE Escape: Main Menu

```
=========A========B========C========D========E========F========G========H====
  1|                  MILEAGE REPORTS            Car No. _____
  2|
  4|                                                        Fill-up   Cumul.
  5|    Date                Miles          Gallons            mpg       mpg
  6|
  7|October 6            8943.00
  8|October 18           9296.00            19.00           18.58     18.58
  9|October 30           9643.00            20.00           17.35     17.95
 10|
 11|November 7           9951.00            19.40           15.88     17.26
 12|November 20         10296.00            18.30           18.85     17.64
 13|
 14|December 1          10592.00            17.70           16.72     17.47
 15|December 12         10966.00            20.10           18.61     17.67
 16|December 21         11354.00            20.70           18.74     17.83
 17|
 18|Quarterly
 19|totals               2411.00           135.20           17.82     17.83
```

H8: (Value) +G8

Type entry or use @ commands @-? for Help

Exercise 4-5C. (Solution)

```
File: mileage report          REVIEW/ADD/CHANGE          Escape: Main Menu
========A========B========C========D========E========F========G========H====
  1|                 MILEAGE REPORTS          Car No. _____
  2|
  4|                                                        Fill-up   Cumul.
  5|    Date              Miles          Gallons                mpg      mpg
  6|
  7|October 6           8943.00
  8|October 18          9296.00            19.00              18.58    18.58
  9|October 30          9643.00            20.00              17.35    17.95
 10|
 11|November 7          9951.00            19.40              15.88    17.26
 12|November 20        10296.00            18.30              18.85    17.64
 13|
 14|December 1         10592.00            17.70              16.72    17.47
 15|December 12        10966.00            20.10              18.61    17.67
 16|December 21        11354.00            20.70              18.74    17.83
 17|
 18|Quarterly
 19|totals              2411.00           135.20              17.82    17.83
--------------------------------------------------------------------------------
H11: (Value) +C11-C7/(E11+E9+E8)

Type entry or use @ commands                                  @-? for Help
```

Exercise 4-5D. (Solution)

```
File: mileage report          REVIEW/ADD/CHANGE          Escape: Main Menu
========A========B========C========D========E========F========G========H====
  1|                 MILEAGE REPORTS          Car No. _____
  2|
  4|                                                        Fill-up   Cumul.
  5|    Date              Miles          Gallons                mpg      mpg
  6|
  7|October 6           8943.00
  8|October 18          9296.00            19.00              18.58    18.58
  9|October 30          9643.00            20.00              17.35    17.95
 10|
 11|November 7          9951.00            19.40              15.88    17.26
 12|November 20        10296.00            18.30              18.85    17.64
 13|
 14|December 1         10592.00            17.70              16.72    17.47
 15|December 12        10966.00            20.10              18.61    17.67
 16|December 21        11354.00            20.70              18.74    17.83
 17|
 18|Quarterly
 19|totals              2411.00           135.20              17.82    17.83
--------------------------------------------------------------------------------
19: (Value) @SUM(E8...E16)

Type entry or use @ commands                                  @-? for Help
```

Exercise 4-5E. (Solution)

File: mileage report REVIEW/ADD/CHANGE Escape: Main Menu

```
========A========B========C========D========E========F========G========H====
 1|                 MILEAGE REPORTS            Car No. ____
 2|
 4|                                                          Fill-up   Cumul.
 5|    Date              Miles          Gallons                 mpg       mpg
 6|
 7|October 6           8943.00
 8|October 18          9296.00            19.00               18.58     18.58
 9|October 30          9643.00            20.00               17.35     17.95
10|
11|November 7          9951.00            19.40               15.88     17.26
12|November 20        10296.00            18.30               18.85     17.64
13|
14|December 1         10592.00            17.70               16.72     17.47
15|December 12        10966.00            20.10               18.61     17.67
16|December 21        11354.00            20.70               18.74     17.83
17|
18|Quarterly
19|totals              2411.00           135.20               17.82     17.83
```

G19: (Value) @SUM(G8...G16)/7

Type entry or use @ commands @-? for Help

Exercise 4-5F. (Solution)

File: mileage report REVIEW/ADD/CHANGE Escape: Main Menu

```
========A========B========C========D========E========F========G========H====
 1|                 MILEAGE REPORTS            Car No. ____
 2|
 4|                                                          Fill-up   Cumul.
 5|    Date              Miles          Gallons                 mpg       mpg
 6|
 7|October 6           8943.00
 8|October 18          9296.00            19.00               18.58     18.58
 9|October 30          9643.00            20.00               17.35     17.95
10|
11|November 7          9951.00            19.40               15.88     17.26
12|November 20        10296.00            18.30               18.85     17.64
13|
14|December 1         10592.00            17.70               16.72     17.47
15|December 12        10966.00            20.10               18.61     17.67
16|December 21        11354.00            20.70               18.74     17.83
17|
18|Quarterly
19|totals              2411.00           135.20               17.82     17.83
```

C16: (Value) +C16-C7/(E16+E15+E14+E12+E11+E9+E8)

Type entry or use @ commands @-? for Help

COMPUTER BUSINESS APPLICATIONS I - Exercise 4-5

File: Solution to mileage report1

MILEAGE REPORTS Car No. _____

Date	Miles	Oil Change	Gallons	Fill-up mpg	Cumul mp
October 6	8943.00				
October 18	9296.00		19.50	18.10	18.1
October 30	9643.00	Yes	20.00	17.35	17.7
November 7	9951.00		19.40	15.88	17.1
November 20	10296.00		18.30	18.85	17.5
December 1	10592.00		17.70	16.72	17.3
December 12	10968.00		20.10	18.71	17.6
December 21	11368.00		20.70	19.32	17.8
Quarterly totals	81057.00		135.70	17.85	17.6
January 5	11888.00		20.10	25.87	18.9
January 16	12550.00	Yes	21.00	31.52	20.4
January 27	13114.00		20.25	27.85	21.1
February 7	13670.00		19.75	28.15	21.8
February 18	14441.00		20.15	38.26	23.2
March 1	15001.00	Yes	19.80	28.28	23.5
March 20	15708.00		21.00	33.67	24.3
Quarterly totals	96372.00		142.05	17.85	21.9
YEARLY TOTALS	177429.00		277.75	19.84	19.7

Next oil change: Sometime in April.

File: Solution to mileage report2

MILEAGE REPORTS CAR NO. _____

Date	Miles	Gallons	Fill-up mpg	Cumul. mpg	Oil Change
October 6	8943.00				
October 18	9296.00	19.50	18.10	18.10	
October 30	9643.00	20.00	17.35	17.72	Yes
November 7	9951.00	19.40	15.88	17.11	
November 20	10296.00	18.30	18.85	17.53	
December 1	10592.00	17.70	16.72	17.38	
December 12	10968.00	20.10	18.71	17.61	
December 21	11368.00	20.70	19.32	17.87	
Quarterly totals	81057.00	135.70	17.85	17.62	
January 5	11888.00	20.10	25.87	18.90	
January 16	12550.00	21.00	31.52	20.40	Yes
January 27	13114.00	20.25	27.85	21.17	
February 7	13670.00	19.75	28.15	21.80	
February 18	14441.00	20.15	38.26	23.20	
March 1	15001.00	19.80	28.28	23.59	Yes
March 20	15708.00	21.00	33.67	24.36	
Quarterly totals	96372.00	142.05	17.85	21.92	
Yearly totals	177429.00	277.75	19.84	19.77	

COMPUTER BUSINESS APPLICATIONS I - Exercise 4-5

File: Solution for template 1

MILEAGE R Car No. _____

Date	Miles	Gallons	Fill-up mpg	Cumul. mpg	Oil Change
Quarterly totals	ERROR	ERROR	ERROR	ERROR	

COMPUTER BUSINESS APPLICATIONS - Exercise 4-6
(Suggested solution)

File: gradesheetsolv.

Class: GRADE SHEET FOR PRINCIPLES OF TEACHING
Spring 19xx

Student #	Obser #1	Obser #2	Obser #3	Book Rep 1	Mid-Term	Final	Course Grade
F45260615	85	85	80	89	88	90	86
M55567890	85	85	95	100	95	92	92
J23467908	89	95	90	85	88	95	90
M23456790	85	90	90	90	91	98	91
Q09834578	80	85	90	80	68	88	82
H12309856	85	90	95	85	88	84	88
A12309856	65	75	95	89	72	92	81
B75354098	85	89	85	95	95	90	90
C65438709	80	85	75	95	87	87	85
P34598723	80	85	85	90	86	92	86
E87943590	70	90	85		89	92	85
J53480912	89	90	85	80	87	89	87
D56489451	90	90	100	100	87	90	93
Y54379812	80	80	90	95	76	94	86
V58768789	75	85	95	85	57	81	80
X68735647	95	89	95	100	95	80	92
T56780466	80	90	90	85	93	91	88
P65489873	80	89	90	95	81	87	87
R63540764	89	90	100	90	95	92	93
H65987346	80	90	85	100	87	89	88
I54300967	80		80	95	90	93	88
K34560987	70		75	80	62	85	74
O35460987	75			80	98		84
L67678900	75	80	85	85	44	90	76

(Suggested solution)
Exercise 4-7

File: COMPBUSAPPLI
Page 1
Report: Equip Inventory 1

Computer	Ser # Comp	Comp Model	Room No.	Person	Date Inst
IBM-XT	6468635	089	F-202	Joyce Lemaster	Mar 10 86
IBM-XT	6106358	089 w/Tecmar	F-203	Carol Bratton	Feb 4 86
IBM-XT	6105588	089 w/AST	F-203	Computer Center	Feb 4 86
Sanyo 555	14838502		F-203	Computer Center	
IBM-XT	6475483	089	F-206	Jo Ann Cottrell	Mar 10 86
IBM	1922985	176	F-206	Laurie Riorden	Aug 26 86
IBM-XT	2041544	089 w/MTBackup	F-207	Nancy Owen	Jun 5 86
IBM-XT	6115690	089 w/AST	F-209	Maria Hooker	Feb 4 86
IBM-XT	6116030	089 w/AST	F-213	Donna Collins	Feb 4 86
IBM-XT	6114849	089 w/AST	F-213	Margene Boorde	Feb 4 86
IBM-XT	6115608	089 w/AST	F-213	Sherry Lindsey	Feb 4 86
IBM-XT	6121357	089 w/AST	F-215	D'Anne Willis	Feb 4 86
IBM-XT	2040656	089 w/Networking	F-215	Rachel Warren	Jul 9 86
IBM-XT	6110894	089 w/AST	F-220	Judy Ates	Feb 4 86
IBM-XT	4283981	Hercules Card	F-7	Louise Emfinger	Dec 11 86
IBM-XT	6121203	089 w/AST	S-218	Barbara Lawton	Feb 4 86
IBM-XT	2041616	089	S-218	Jean Bell	Mar 10 87
IBM	72-1062190	Personal System	S-220	Cheryl Chambers	Aug 20 87
IBM-XT	4283833	Hercules Card	S-222	Michelle Reid	Jan 5 87
IBM-XT	4284365	Hercules Card	S-224	Nanatte Lites	Jan 5 87
IBM-XT	4283319	Hercules Card	S-228	Gloria Wells	Jan 5 87
IBM-XT	2036716	089 w/MTBackup	S-228	Pat Garland	Oct 30 86

File: COMPBUSAPPLI
Report: Equip Inventory 2

Printers	Ser # Print	Printer Model	Room No.	Person	Date Inst
Quietwriter	4021034		F-202	Joyce Lemaster	Mar 10 86
Quietwriter	4021126	Model 2	F-203	Carol Bratton	Feb 4 86
C.ITOH F-10	BJ19BU	Starwriter	F-203	Computer Center	Feb 4 86
C.ITOH F-10	BJ19BU	Starwriter	F-203	Computer Center	
Quietwriter	0141468		F-206	Jo Ann Cottrell	Mar 10 86
Quietwriter	4032844	Model 2	F-206	Laurie Riorden	Aug 26 86
Quietwriter	0138545		F-207	Nancy Owen	Jun 5 86
Quietwriter	0145376		F-209	Maria Hooker	Feb 4 86
Quietwriter	0046980		F-213	Donna Collins	Feb 4 86
Quietwriter	0139606		F-213	Margene Boorde	Feb 4 86
Quietwriter	0140944		F-213	Sherry Lindsey	Feb 4 86
Quietwriter	0140932		F-215	D'Anne Willis	Feb 4 86
Quietwriter	0141915		F-215	Rachel Warren	Jul 9 86
Quietwriter	0137291		F-220	Judy Ates	Feb 4 86
Wheelwriter	11-G6679		F-7	Louise Emfinger	Dec 11 86
Quietwriter	0145083		S-218	Barbara Lawton	Feb 4 86
Quietwriter	4043591	Model 2	S-218	Jean Bell	Mar 10 87
Quietwriter	11-702-6013	Model 3	S-220	Cheryl Chambers	Aug 20 87
Quietwriter	0113073		S-222	Michelle Reid	Jan 5 87
quietwriter	0112018		S-224	Nanatte Lites	Jan 5 87
Quietwriter	0160017		S-228	Gloria Wells	Jan 5 87
Quietwriter	0126353		S-228	Pat Garland	Oct 30 86

File: COMPBUSAPPL.I
Report: Equip Inventory 3

Monitors	Ser # Mon	Room No.	Person	Date Installed
Amdek	6150111	F-202	Joyce Lemaster	Mar 10 86
IBM	6021482	F-203	Carol Bratton	Feb 4 86
IBM	0078044	F-203	Computer Center	Feb 4 86
Sanyo	11164721 23073	F-203	Computer Center	
Amdek	6133835	F-206	Jo Ann Cottrell	Mar 10 86
IBM	3835997	F-206	Laurie Riorden	Aug 26 86
IBM	3674209	F-207	Nancy Owen	Jun 5 86
IBM	3674159	F-209	Maria Hooker	Feb 4 86
IBM	3674176	F-213	Donna Collins	Feb 4 86
Amdek	6231054	F-213	Margene Boorde	Feb 4 86
IBM	3674234	F-213	Sherry Lindsey	Feb 4 86
Amdek	6231231	F-215	D'Anne Willis	Feb 4 86
IBM	3677032	F-215	Rachel Warren	Jul 9 86
IBM	3674259	F-220	Judy Ates	Feb 4 86
Amdek	6390470	F-7	Louise Emfinger	Dec 11 86
IBM	6013888	S-218	Barbara Lawton	Feb 4 86
Amdek	6231010	S-218	Jean Bell	Mar 10 87
IBM	72-0137487	S-220	Cheryl Chambers	Aug 20 87
Amdek	6390081	S-222	Michelle Reid	Jan 5 87
Amdek	6390166	S-224	Nanatte Lites	Jan 5 87
Amdek	6321456	S-228	Gloria Wells	Jan 5 87
Amdek	6313757	S-228	Pat Garland	Oct 30 86

File: COMPBUSAPPL.I
Report: Equip Inventory 4

Room No.	Computer	Monitors	Printers	Person	Date Install
F-202	IBM-XT	Amdek	Quietwriter	Joyce Lemaster	Mar 10 86
F-203	IBM-XT	IBM	Quietwriter	Carol Bratton	Feb 4 86
F-203	IBM-XT	IBM	C.ITOH F-10	Computer Center	Feb 4 86
F-203	Sanyo 555	Sanyo	C.ITOH F-10	Computer Center	
F-206	IBM-XT	Amdek	Quietwriter	Jo Ann Cottrell	Mar 10 86
F-206	IBM	IBM	Quietwriter	Laurie Riorden	Aug 26 86
F-207	IBM-XT	IBM	Quietwriter	Nancy Owen	Jun 5 86
F-209	IBM-XT	IBM	Quietwriter	Maria Hooker	Feb 4 86
F-213	IBM-XT	IBM	Quietwriter	Donna Collins	Feb 4 86
F-213	IBM-XT	Amdek	Quietwriter	Margene Boorde	Feb 4 86
F-213	IBM-XT	IBM	Quietwriter	Sherry Lindsey	Feb 4 86
F-215	IBM-XT	Amdek	Quietwriter	D'Anne Willis	Feb 4 86
F-215	IBM-XT	IBM	Quietwriter	Rachel Warren	Jul 9 86
F-220	IBM-XT	IBM	Quietwriter	Judy Ates	Feb 4 86
F-7	IBM-XT	Amdek	Wheelwriter	Louise Emfinger	Dec 11 86
S-218	IBM-XT	IBM	Quietwriter	Barbara Lawton	Feb 4 86
S-218	IBM-XT	Amdek	Quietwriter	Jean Bell	Mar 10 87
S-220	IBM	IBM	Quietwriter	Cheryl Chambers	Aug 20 87
S-222	IBM-XT	Amdek	Quietwriter	Michelle Reid	Jan 5 87
S-224	IBM-XT	Amdek	quietwriter	Nanatte Lites	Jan 5 87
S-228	IBM-XT	Amdek	Quietwriter	Gloria Wells	Jan 5 87
S-228	IBM-XT	Amdek	Quietwriter	Pat Garland	Oct 30 86

File: COMPBUSAPPL.I
Report: Equip Inventory 5

Person	Room No.	Computer	Monitors	Printers	Date Installe
Joyce Lemaster	F-202	IBM-XT	Amdek	Quietwriter	Mar 10 86
Carol Bratton	F-203	IBM-XT	IBM	Quietwriter	Feb 4 86
Computer Center	F-203	IBM-XT	IBM	C.ITOH F-10	Feb 4 86
Computer Center	F-203	Sanyo 555	Sanyo	C.ITOH F-10	
Jo Ann Cottrell	F-206	IBM-XT	Amdek	Quietwriter	Mar 10 86
Laurie Riorden	F-206	IBM	IBM	Quietwriter	Aug 26 86
Nancy Owen	F-207	IBM-XT	IBM	Quietwriter	Jun 5 86
Maria Hooker	F-209	IBM-XT	IBM	Quietwriter	Feb 4 86
Donna Collins	F-213	IBM-XT	IBM	Quietwriter	Feb 4 86
Margene Boorde	F-213	IBM-XT	Amdek	Quietwriter	Feb 4 86
Sherry Lindsey	F-213	IBM-XT	IBM	Quietwriter	Feb 4 86
D'Anne Willis	F-215	IBM-XT	Amdek	Quietwriter	Feb 4 86
Rachel Warren	F-215	IBM-XT	IBM	Quietwriter	Jul 9 86
Judy Ates	F-220	IBM-XT	IBM	Quietwriter	Feb 4 86
Louise Emfinger	F-7	IBM-XT	Amdek	Wheelwriter	Dec 11 86
Barbara Lawton	S-218	IBM-XT	IBM	Quietwriter	Feb 4 86
Jean Bell	S-218	IBM-XT	Amdek	Quietwriter	Mar 10 87
Cheryl Chambers	S-220	IBM	IBM	Quietwriter	Aug 20 87
Michelle Reid	S-222	IBM-XT	Amdek	Quietwriter	Jan 5 87
Nanatte Lites	S-224	IBM-XT	Amdek	quietwriter	Jan 5 87
Gloria Wells	S-228	IBM-XT	Amdek	Quietwriter	Jan 5 87
Pat Garland	S-228	IBM-XT	Amdek	Quietwriter	Oct 30 86

COMPUTER BUSINESS APPLICATIONS I - Exercise 4-7
(Suggested solution)

TO: John Smith SUBJECT: Computer Inventory

FROM: (Student's Name) DATE: (Today's)

Listed below is the information you requested regarding the location of computer equipment installed in 1986 and 1987 in our department. Let me know if you need further information.

Room No.	Computer	Monitors	Printers	Person	Date Installed
F-202	IBM-XT	Amdek	Quietwriter	Joyce Lemaster	Mar 10
F-203	IBM-XT	IBM	Quietwriter	Carol Bratton	Feb 4
F-203	IBM-XT	IBM	C.ITOH F-10	Computer Center	Feb 4
F-203	Sanyo 555	Sanyo	C.ITOH F-10	Computer Center	?
F-206	IBM-XT	Amdek	Quietwriter	Jo Ann Cottrell	Mar 10
F-206	IBM	IBM	Quietwriter	Laurie Riorden	Aug 26
F-207	IBM-XT	IBM	Quietwriter	Nancy Owen	Jun 5
F-209	IBM-XT	IBM	Quietwriter	Maria Hooker	Feb 4
F-213	IBM-XT	IBM	Quietwriter	Donna Collins	Feb 4
F-213	IBM-XT	Amdek	Quietwriter	Margene Boorde	Feb 4
F-213	IBM-XT	IBM	Quietwriter	Sherry Lindsey	Feb 4
F-215	IBM-XT	Amdek	Quietwriter	D'Anne Willis	Feb 4
F-215	IBM-XT	IBM	Quietwriter	Rachel Warren	Jul 9
F-220	IBM-XT	IBM	Quietwriter	Judy Ates	Feb 4
F-7	IBM-XT	Amdek	Wheelwriter	Louise Emfinger	Dec 11
S-218	IBM-XT	IBM	Quietwriter	Barbara Lawton	Feb 4
S-218	IBM-XT	Amdek	Quietwriter	Jean Bell	Mar 10
S-220	IBM	IBM	Quietwriter	Cheryl Chambers	Aug 20
S-222	IBM-XT	Amdek	Quietwriter	Michelle Reid	Jan 5
S-224	IBM-XT	Amdek	quietwriter	Nanatte Lites	Jan 5
S-228	IBM-XT	Amdek	Quietwriter	Gloria Wells	Jan 5
S-228	IBM-XT	Amdek	Quietwriter	Pat Garland	Oct 30

COMPUTER BUSINESS APPLICATIONS I

SUGGESTED SOLUTIONS FOR EXERCISE 4-8

LEARNING OUTCOME:

- .. Determine the best method for dissemination of word processing, database, and spreadsheet documents
- .. Identify the necessary equipment for dissemination of word processing, database, and spreadsheet documents
- .. Demonstrate how to operate facsimile, modems, or other information distribution devices which may be available in the classroom for disseminating documents

How would you...

1. make traditional distribution of information to persons outside the organization? **Telephone, U. S. postal services, telegram, TWX**

2. send a document overnight for next morning delivery? **Federal Express or other delivery service**

3. send a document for next day delivery? **Overnight letter from U. S. Post Office, Federal Express or other delivery service**

4. deliver a document to a manager in another city who has called you at 9:00 a.m. for delivery by 1:00 p.m.? **Facsimile**

5. deliver information to an employee in another department who has come for the document in person? **Hand letter or report to him/her**

6. deliver a document to your supervisor who is overseas and needs it for a meeting the next morning? **FAX**

7. receive a document from your supervisor which needs revision and return it to him/her for approval while he/she is either out of the city or out of the country? **FAX, air express, international delivery service**

8. deliver information to an employee in another department who has called you on the telephone? **Verbal or take in person**

9. deliver a message from one colleague to another colleague who is out of the office but who needs the information when he/she returns? **E-Mail or voice mail**

10. obtain information for your supervisor from another branch office in your company for a 2:00 p.m. meeting (and it is 1:00 p.m.)? **Telephone or E-Mail (if a hard copy is needed)**

11. obtain information for your supervisor from an office in another division of the company in a city 500 miles away for a 10:00 a.m. meeting (it is 8:30 a.m.)? **Verbal, FAX, E-Mail**

12. leave a message for another colleague to call you when he/she returns: traditionally? or electronically? **If traditionally, leave message with the person who answers the phone; if electronically, leave message on voice mail or in E-Mailbox.**

13. receive a message from another colleague when <u>you</u> are out of the office: traditionally? or electronically? **If traditionally, receive written message from the person in the office who took the message; if electronically, access or log on to E-Mail or voice mail.**

NOTE TO INSTRUCTOR: Please add your own exercises or questions pertaining to your classroom situation or bring out points you want to cover. These questions may not be written exercises for the students to complete but provide the basis for classroom discussion of the distribution cycle. You might also consider asking the questions and let students key in their answers on automated equipment and print the results for evaluation.

Computer Business Applications I

course one

References

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BE WARY OF VIRUS PROGRAMS

Computer virus programs can attack any type of computer system. They are passed from one disk to another through contaminated software. These viruses can be programmed to destroy hard disks or floppy ones; they can damage specific data, cause wholesale destruction, or fall somewhere in between.

Most viruses are programmed to copy themselves to other disks, thereby spreading the contamination.

Even more bugs

In addition to viruses, three other programs damage computer data. A Trojan horse--generally disguised as an interesting type of software such as games or graphics or which promises confidential data--will steal data from your computer or disk while the software is being executed. Trojan horses can be used to change password combinations or to alter computer accounts.

Time bombs wait for a specific time to perform a task, such as sending the user a message or damaging data. A worm, on the other hand, will attach itself to a specific utility and gradually gnaw at files whenever the utility is used.

Avoiding damage

To avoid possible damage, users should exercise caution. First of all, be wary of software that has been downloaded from a bulletin board.

Bulletin board system operators (sysops) try to eradicate all contaminated software, but it doesn't hurt to double-check. Use a duplicate of your system as a start-up disk to load unknown software.

It's always a good idea to have all your data backed up and removed from your computer system. Further, you shouldn't have your backed-up data on the same disk that contains copies of your operating system. If the system is infected, the contamination could spread to the rest of the data on the disk.

If you think your system has become infected, substitute a clean copy of the operating system and, before using it again, turn off the machine.

It's a good idea to turn off a personal computer in a public area before you use it, since there is no way to tell what type of software was used by the person before you.

Frequently check the dates which tell when you've updated your operating system disks and your files. These dates should be consistent with your computer use.

Vaccination

As one last precautionary measure, you can use a vaccine-type program on your computer. This software doesn't guarantee that it will destroy a virus, but it should alert you to the existence of one. Such software is available for various operating systems.

Above all else, you should exercise caution, but don't become overly concerned when your system crashes. The crash may have nothing to do with a virus, Trojan horse, or time bomb.

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Other articles in public journals have been written regarding viruses. Check the following:

Time
A+
Byte
Personal Computing
MacWorld
etc.

Viruses Threatening Era of Computer Freedom

By Christine Winter

At George Washington University, students were complaining about data disappearing from their floppy disks. One day it was there; the next it wasn't.

Computer programmers in the lab took one of the damaged disks and delved into the complex lines of computer code used to write the programs on it. Translated, the message read: "Welcome to the Dungeon . . . Beware of this VIRUS. Contact us for vaccination. . . ." Included were two names, an address and three telephone numbers in Lahore, Pakistan.

Six months ago, a half dozen small businesses in California started using an accounting software package they got free from an electronic bulletin board sponsored by a local computer store. Everything went smoothly until each of them hit a certain total in accounts receivable; at that point, all their hard disk drives mysteriously erased all their accounting records.

In recent weeks in Silicon Valley, several employees at a small company reportedly had their video monitors catch fire while they worked at their PCs. Investigators speculate that the diskettes they were using contained buried commands that changed the cycle speed of certain video functions, causing the monitors to overheat and ignite.

Behold the arrival of the computer virus—an electronic scourge that could have the same chilling effect on the free flow of data that AIDS has had on the sexual revolution.

A computer virus is simply a small computer program. However, it is designed not to process words or crunch numbers, but to do some kind of damage: to delete data, alter information or destroy hardware. Viruses are written in a computer programming language, a type of code made up of numbers and symbols that gives instructions to the computer "behind the screen."

What differentiates a computer virus from any other program, or even any other form of computer sabotage, is this: It gives instructions to attach itself to other, innocent programs and to reproduce itself.

The average user would not see these few extra characters or lines of programming code on the screen, or understand them if he did. Even a sophisticated programmer would have to go looking for a virus to find it.

Another devious feature of a virus is that it is a time bomb. It is designed to do its dirty work later, when some date or event triggers it.

A virus recently found at Hebrew University in Jerusalem, for example, was designed to delete all files on the university's massive network, which included government and military installations, on May 13. It has been decoded and dismantled. Because of these delayed "logic bombs" that are built into most viruses, they are likely to spread among a given user group before they do anything to make their presence known.

Today's trend toward connecting computers and sharing information over electronic bulletin boards makes viruses more contagious. These electronic bulletin boards are forums where computer users can communicate and trade "public domain" or free software via telephone linkups to commercial public networks.

One of the biggest threats to corporations comes from the trend to bring computer work home — where diskettes could be infected by programs that children bring home from school or get from bulletin boards.

A virus spreads by burying itself deep within the computer's operating system, which is the set of instructions that tells the computer how to do specific housekeeping tasks. This system must run every time the computer is turned on.

The virus then gives commands to make room for a copy of itself on every data diskette, or every program stored on the hard disk in the infected computer. Every time a new diskette is used to store data or copy a program the virus goes along. When that diskette is introduced into a clean computer, it spreads the virus to its operating system. When data from that newly infected computer is stored on a clean diskette, the virus spreads there, too, and so on. Just like a com-

mon cold or the flu.

There seems to be no such thing as a harmless virus. The virus that hit George Washington University and at least four other East Coast schools is generally described as passive. It was apparently intended to do nothing more harmful than keep duplicating itself, said Michael Peckman, a programmer-analyst there. But it wreaked unintentional havoc by deleting or damaging data when it made room for itself on student diskettes.

A computer programmer creates a virus, which is a disruptive computer code that is able to duplicate itself and attach to other programs and data files.

A floppy disk that contains the virus will infect the memory, hard disk and other floppy disks in the computer. The virus remains, even when the original disk is removed.

Even if a computer is shut off and the memory wiped clean, the virus remains on the hard disk, storage disks or backup tapes.

Each time the virus comes into contact with a program, it duplicates and attaches itself, making it possible to infect a 'clean' disk or to infect programs that are shared on a network or sent to another computer via a modem.

The virus carries out the instructions written by the programmer. Those instructions can be as benign as a message that flashes on the screen at a specified time or date or as destructive as a command to delete or alter files on a certain date.

"The people who write these programs are not pranksters, they're vandals," said Dennis Director, president of Evanston, Ill.-based Director Technologies Inc. His Disk Defender is one of several security products, originally designed to prevent accidental data loss, that are being seen in a different light today.

There are some who think the viruses have been overdramatized by the media. Phillip McKinney, a manager at Oak Brook, Ill.-based Thumbscan Inc., a security products company, said there are probably only seven or eight viruses in active circulation in this country.

"There's never really been a documented case of industrial sabotage," he said. "This isn't something that is a serious threat for the average corporation on a yearly basis."

Fred Cohen, a University of Cincinnati professor of computer science, does not agree that the recent media hype has blown the problem out of proportion.

The best known virus episodes have a lot of flash but not much substance, he said. The more successful a virus is, the less likely anyone is to know about it.

Cohen, who is generally credited with developing the first computer virus as part of research on computer security for his doctoral thesis in 1983, suspects we are only seeing the tip of the phenomenon. There could be viruses at work in corporate America that may never be discovered, he said. These viruses are much more subtle and dangerous than "the gross and vulgar ones" that give themselves away by destroying everything.

"Suppose that a rival introduces a virus that would infiltrate the computers controlling the manufacturing process in a steel or semiconductor plant and just slows down production for a couple of months, or reduces the quality of the product being made," he suggested.

"If someone wrote a virus that would instruct a corporate computer to leak information, they would do it slowly and selectively, so it could go on undetected for a long time," he said.

Cohen admits he did not make the decision to turn computer viruses loose on the world lightly when he decided to publish his early findings. He concluded that somebody would discover how to create them soon enough, and it was better to warn the world about what was coming.

Although it may not seem so to those uninitiated in the mysteries of computers, Cohen said viruses are so easy to write that "anybody can do it." He said that in some programming languages, he could write a simple virus in as few as 11 characters; many of those circulating today are about 100 to 200 characters—perhaps 10 to 20 lines of code."

Most documented cases of viruses in corporations have been in high-tech companies.

But the latest epidemic has been in the university systems around the world and has attacked personal computers. It is possible, although more difficult, to make a virus that can migrate up through larger systems.

"The academic world is especially vulnerable," although Northwestern and most Midwestern universities have not been victims of an outbreak yet, Roll said. "Our computers are easy to get into and we have fairly little security. After all, the whole purpose is to make the system fairly open so students can use it and learn it."

At Lehigh University in Bethlehem, Pa., students can sign out publicly usable software like library books. Last fall, the students who run the service noticed that a lot of diskettes were coming back faulty.

A virus was on the move that destroyed all the files on the parent disk after it had made four copies of itself. Each of those four "children" would make four copies of itself, and the parent files would self-destruct.

Kenneth van Wyk, a user consultant at Lehigh's computing center, said that once computer experts suspected mischief, it wasn't hard to find the virus, and even less difficult to write an antidote — a short program that simply deleted the 100 or so characters of machine language code

that made up the virus.

Thumbscan is looking into developing "secure software." These prorams would detect any attachments or changes to a given program, then alert the operator or shut the program down.

"You can't prevent viruses," McKinney said. "The direction for security designers today is detection. What we need is virus alarms, ways of detecting viruses before they do damage, while backup copies are still secure."

Users are advised to be leery of public domain software, and of sharing software — and access to their computers — with anyone they don't know.

Computer magazines are urging everyone to put their operating systems on a separate disk and use "write protect tabs," which prevent anything from being added to the disk. Products like Director's Disk Defender perform similar functions for hard disk drives, while Thumbscan's PCBoot restricts those who can turn on the operating system for a PC or network.

Many public bulletin boards are becoming more private, opening access only to members and trying to verify the software distributed.

Backup copies of programs should be made when the system is known to be "clean" and put away for safekeeping.

There is no across-the-board test for viruses. A few give themselves away with various error messages or labels, but these are weaknesses that are quickly corrected by their creators in later versions.

"The most important thing is to recognize that you are at risk," said Cohen, who insists that computer users should not become terrorized by the threat.

"We can't give up all we've gained from the use of computers because of paranoia about these dangers," he said. "They're just part of life, like the flu."

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COMPUTER BUSINESS APPLICATIONS I

PERIODICALS/RESOURCES

Suggested resources include but should not be limited to:

Periodicals

ACCESS
ADMINISTRATIVE MANAGEMENT (formerly OFFICE ADMINISTRATION AND AUTOMATION)
ARMA RECORDS MANAGEMENT QUARTERLY
BUSINESS COMPUTER DIGEST
BUSINESS WEEK
BYTE
COMPUTER DECISIONS
COMPUTER WORLD, including their Office automation and Telecommunications issues
DATA COMMUNICATIONS
DATAMATION
DATAPRO REPORTS (available for a number of areas in Office Automation, including Automated Office Solutions, Office systems, Word Processing, Copiers and Duplications, Small Computers, Microcomputer Software, and Telecommunications)
FORBES (excellent source for International Data Corporation white papers written several times a year as an advertisement supplement)
FORTUNE (excellent source for International Data Corporation white papers written several times a year as an advertisement supplement)
GRAPHICS ARTS MONTHLY
HIGH TECHNOLOGY
IMPACT
INDUSTRY WEEK
INFORMATION MANAGEMENT
INFOSYSTEMS
INFOWORLD
INTERFACE AGE
MANAGEMENT REVIEW
MANAGEMENT TECHNOLOGY
MANAGEMENT WORLD
MIS WEEK
MODERN OFFICE TECHNOLOGY (formerly MODERN OFFICE PROCEDURES)
THE OFFICE
PC WEEK
THE SEYBOLD REPORT ON OFFICE SYSTEMS
TECHNOLOGY IN FOCUS
TODAY'S OFFICE
TRAINING
TYPEWORLD
WORDS

BOOKS AND MONOGRAPHS

APPROACHING THE AUTOMATED OFFICE, Walter S. Kleinschrod, 1987-88.
(Based on a series of four monographs developed from a grant by Olsten Corporation to the AMS Foundation: This monograph and the other four are available from the Administrative Management Society Foundation, 2360 Maryland Road, Willow Grove, PA 19090).

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